Report for Subagreement No. 20
to
Cooperative Agreement No. CA9000-95-018
Mammal and Herpetological Inventories
Nez Perce National Historical Park

University of Idaho
and
National Park Service
Columbia Cascades Support Office

November 2003

Crystal Ann Strobl
Lisa K. Garrett
Tom Rodhouse

University of Idaho
Department of Fish and Wildlife Resources
PO Box 441136
Moscow, Idaho 83844-1136

Table of Contents

List of Tables

List of Figures

Executive Summary

This primary objective of the 2002 mammal and herpetological inventory was to document 90% of all mammals (excluding bats), amphibians, and reptiles that potentially occur within Nez Perce National Historical Park. The University of Idaho Department of Fish and Wildlife Resources conducted the 2002 inventory under a cooperative agreement with the National Park Service Northern Semi-Arid Network. Inventories were conducted at 5 sites within Nez Perce National Historical Park. The sites were chosen by the resource manager at Nez Perce National Historical Park and were based on acreage and natural resource importance to the park. Additional goals of the inventory included development of baseline data for use in long-term monitoring, and the collection and dissemination of new information on the distribution, habitat association, and population status of the region's biological resources.

Expected species lists were developed by reviewing range maps, interviewing park staff, and obtaining habitat data from the Idaho GAP Analysis program. This effort resulted in a species list that included 14 species of amphibians and reptiles and 34 species of non-volant mammals expected to occur in at least one of the 5 park sites included in the inventory. A total of 11 species of amphibians and reptiles were confirmed in 2002, representing 78% of the expected species. A total of 28 species of mammals were confirmed in 2002, representing 82% of the expected species. Four of the confirmed species, the western toad (*Bufo boreas*), the ringneck snake (*Diadophis punctatus*), the river otter (*Lontra canadensis*), and the bighorn sheep (*Ovis canadensis*) are listed as sensitive species by the Bureau of Land Management (BLM) and species of special concern by the Idaho Department of Fish and Game (IDFG).

Sampling techniques used in this inventory project included visual encounter surveys, dipnetting, cover turning, road surveys, and trapping. Although bats were not included in the 2002 inventory due to logistical constraints, sites with bat activity were noted for future surveys. A total of 80 mammal, reptile, and amphibian species were observed within the study area, including all four expected species with state sensitive and federal species of concern status. Bullfrogs (*Rana catebeiana*), an introduced species, were detected at two localities (White Bird Battlefield and Heart of the Monster) during this study. Control of this species should be taken into consideration.

The western toad was the most widely distributed amphibian with the highest estimated abundance across all sites sampled. The bullfrog had the second highest abundance, occurring at two locations. The racer (*Coluber constrictor*) was the most widely distributed reptile with the highest abundance across all sites sampled. The western terrestrial garter snake (*Thamnophis elegans*) had the second highest abundance within all sites sampled. The mammals with the highest occurrence across all five sampling sites were the coyote (*Canis latrans*), the deer mouse (*Peromyscus maniculatus*), the mule deer (*Odocoileus hemionus*), the white-tailed deer (*Odocoileus virginianus*), and the northern pocket gopher (*Thomomys talpoides*).

I. Introduction

This report summarizes the results of the 2002 mammal (excluding bats) and herpetological inventory for the Nez Perce National Historical Park. The mammal inventory did not include bats within its scope due to logistical constraints. The inventory was conducted by the University of Idaho Department of Fish and Wildlife Resources under a cooperative agreement with the National Park Service Northern Semi-Arid Network. The inventory is part of a nationwide inventory and monitoring (I & M) program initiated by the National Park Service Natural Resource Challenge. This program seeks to increase the capacity of the National Park Service (NPS) to assess the current state of natural resources within the NPS system and to enhance its ability to take a leading role in preserving the nation's biological diversity of plants and animals. Completing basic biological inventories is a crucial first step in achieving that goal.

In 2000, the Northern Semi-Arid Network of parks began implementing the inventory phase of the I & M program in several of the network parks and monuments. Historic information available on the plant and animal populations within the network were assembled and an estimate was made of the percent of species expected to occur in each park. Nez Perce National Historical Park was among the majority of network parks that had a low (below 50%) percentage of confirmed vertebrates. Prior to the I & M program, only one preliminary effort to inventory birds and small mammals had been made (Monello and Wright 1998). A bird inventory for the park was completed under direction from University of Idaho in 2000 for the I & M program (Dixon in press). Fieldwork for this mammal and herpetological inventory was conducted between March and August 2002.

The objectives of the 2002 mammal and herpetological inventory at Nez Perce National Historical Park were to: (1) Document 90% of the mammals and herpetofauna expected to occur there; (2) Gather baseline data for use in future monitoring; (3) Collect and disseminate new information on the distribution, habitat association, and population status of the mammal and herpetological species of the region.

II. Study Area

The Nez Perce National Historic Park consists of 38 sites widely scattered across western Montana, Idaho, eastern Washington, and eastern Oregon. The park was established in 1965 and originally contained 24 sites. In 1992, 14 additional sites were added to the park, including those outside Idaho. The 2002 vertebrate inventory was conducted in 5 sites. Three sites were located in central Idaho and included the Spalding site, which serves as the park headquarters. The two other Idaho sites included in the inventory were White Bird Battlefield and Heart of the Monster (East Kamiah). Bear Paw Battlefield, located in north central Montana, and Dug Bar, located along the Snake River in northeastern Oregon, were also included in the inventory. Figure 1 shows the locations of each of the five sites. The acreages for each site included in the inventory reflect the resource areas actively managed by the NPS and not additional private land held in easement.

Each of the sites included in the 2002 inventory are ecologically distinct from each other Ecological distinctions were based on habitat types, elevation, hydrology, and climatic patterns. Vegetative characteristics for the sites in Idaho and Oregon were evaluated using the Idaho Vegetation and Land Cover Classification System (Redmond et al. 1997, Homer et al. 1998). The site in Montana, Bear Paw Battlefield, was evaluated using the Montana Land Cover Atlas (Fisher et al. 1998). Idaho and Oregon sites are represented by non-forested lands, forested uplands, and riparian and wetland area vegetation and land cover classes. The Montana site, Bear Paw Battlefield, is represented by altered herbaceous, sagebrush, and shrub riparian land cover classes. The categories and sub-categories used to further characterize these distinct classes are explained in detail below and also in Table 1. These land cover subdivisions were used in the inventory to represent unique habitat types.

A. Spalding

This 100-acre site is located within the Nez Perce Indian Reservation on the confluence of Lapwai Creek and the Clearwater River about 16 km (10 miles) east of Lewiston, Idaho on Highway 95. Elevations at this site range from 233 m to 251 m (766 ft – 825 ft). There are two distinct habitat types present; mixed needleleaf/broadleaf forest and disturbed grassland. The majority of the mixed needleleaf/broadleaf forest community consists of the following species; ponderosa pine (*Pinus ponderosa*), prickly rose (*Rosa acicularis*), black cottonwood (*Populus balsamifera*), maple (*Acer spp.*), and willow (*Salix spp.*). The disturbed grassland community is dominated by the following species; cheatgrass (*Bromus tectorum*), spotted knapweed (*Centaurea maculosa*), red clover (*Trifolium pratense*), yarrow (*Achillea millefolium*), and yellow star thistle (*Centaurea solstitialis*). 30-year (1971-2000) climate data collected in Lewiston indicate that the Spalding site is relatively dry, with mean annual precipitation totaling only 13 inches (Idaho State Climate Services 2003). 30-year mean temperatures for January and July are 34 ^{o}F and 60 ^{o}F, respectively (Idaho State Climate Services 2003). January and July mean maximum and minimum temperatures for the same period are 39 ^{o}F and 28 ^{o}F, and

88 °F and 74 °F, respectively (Idaho State Climate Services 2003). Lapwai Creek is a permanent stream that flows through the Spalding site. Water flow in Lapwai Creek decreases substantially in early July.

B. White Bird Battlefield

White Bird Battlefield is located about 24 km (15 mi) south of Grangeville, Idaho between Highway 95 and the old White Bird Grade, roughly 1 km from the town of White Bird. Elevations at this site range from 518 m (1700 ft) to 976 m (3200 ft). This site contains approximately 1245 acres of rolling hills. There are three distinct habitat types located at this site; disturbed grassland, perennial grassland, and mesic upland shrubs. The disturbed grassland community has the following species present; Canada thistle (*Cirsium arvense*), spotted knapweed (*Centaurea maculosa*), Scotch thistle (*Onopordon acanthium*), yellow star thistle (*Centaurea solstitialis*), and cheatgrass (*Bromus tectorum*). The perennial grassland community includes bluegrass (*Poa spp.*), intermediate wheatgrass (*Agropyron intermedium*), and needle and thread (*Stipa comata*). The mesic upland shrub community consists of chokecherry (*Prunus virginiana*), willow (*Salix spp.*), black hawthorn (*Crataegus douglasii*), and prickly rose (*Rosa acicularis*). 30-year climate data collected in Grangeville indicates that mean annual precipitation is 24 inches (Idaho State Climate Services 2003). 30-year mean temperatures for January and July are 24 °F and 52 °F, respectively. Mean maximum and minimum temperatures for January and July during the same period is 38 °F and 31 °F, and 82 °F and 67 °F, respectively (Idaho State Climate Services 2003). Available water at this site is contained within Swartz pond and a small spring located on the east edge of the battlefield near the boundary line.

C. Heart of the Monster

This 53-acre site located on the Clearwater River, within the Nez Perce Indian Reservation, is about 32 km (20 mi) east of Orofino, Idaho on Highway 12. Elevations at this site range from 360 m (1183 ft) to 378 m (1242 ft). The Heart of the Monster has two distinct habitat types present; shrub dominated riparian and disturbed grassland. The shrub dominated riparian community consists of species such as Douglas fir (*Pseudotsuga menziesii*), prickly rose (*Rosa acicularis*), common snowberry (*Symphoricarpos albus*), red-osier dogwood (*Cornus sericea*), black cottonwood (*Populus balsamifera*), and willow (*Salix spp.*). The disturbed grassland includes spotted knapweed (*Centaurea maculosa*), Canada thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*), Scotch thistle (*Onopordon acanthium*), and black medic (*Medicago lupulina*). 30-year climate data collected in Orofino indicates that mean annual precipitation is 27 inches (Idaho State Climate Services 2003). 30-year mean temperatures for January and July are 25 °F and 53 °F, respectively. Mean maximum and minimum temperatures for January and July during the same period is 38 °F and 31 °F, and 88 °F and 71 °F, respectively (Idaho State Climate Services 2003). In addition to riparian habitat along the Clearwater River, this site also has a pond that is formed by spring overflow from the river

D. Bear Paw Battlefield

Bear Paw Battlefield is 190 acres and is located 25 km (16 mi) south of Chinook, Montana along the Cleveland Road (Highway 240). Elevations at this site range from 908 m (2979 ft) to 927 m (3040 ft). There are three distinct habitat types that are present at the battlefield; altered herbaceous, sagebrush, and shrub riparian. Species in the altered herbaceous type include stinging nettle (*Urtica dioica*), crested wheatgrass (*Agropyron cristatum*), smooth brome (*Bromus inermis*), common tansymustard (*Descurainia sophia*), cheatgrass (*Bromus tectorum*), and Canada thistle (*Cirsium arvense*). The sagebrush habitat community consists of big sagebrush (*Artemisia tridentata*), needle and thread (*Stipa comata*), Sandberg bluegrass (*Poa sandbergii*), common snowberry (*Symphoricarpos albus*), and blue gramma (*Bouteloua gracilis*). The shrub riparian type includes willow (*Salix spp.*), rose (*Rosa spp.*), currant (*Ribes spp.*), box-elder (*Acer negundo*), and black cottonwood (*Populus balsamifera*). Climate data collected in Chinook indicates that Bear Pay Battlefield is relatively dry. 30-year mean annual precipitation is only 13 inches (Western Regional Climate Center 2003). 30-year mean temperatures for January and July are not available, but mean maximum and minimum temperatures for January and July during the 30-year period is 28 ^{o}F and 3 ^{o}F, and 84 ^{o}F and 52 ^{o}F, respectively (Western Regional Climate Center 2003). Riparian habitat in the site occurs along Snake Creek, an ephemeral stream that flows only a few weeks out of the year and is subject to irrigation demands from private landowners adjacent to the battlefield.

E. Dug Bar

Dug Bar is located about 40 km (25 mi) north of Imnaha, Oregon, along the Snake River. Elevations at this site range from 305 m (1000 ft) to 366 m (1200 ft). Dug Bar has two distinct habitat types present; disturbed grassland and mountain big sagebrush. The disturbed grassland habitat consists mainly of the following species; cheatgrass (*Bromus tectorum*), common tansymustard (*Descurainia sophia*), and yarrow (*Achillea millefolium*). The big sagebrush community consists of the following; big sagebrush (*Artemisia tridentata*), brittle prickly-pear cactus (*Opuntia fragilis*), and junegrass (*Koeleria macrantha*). Climate data for this site is sparse. A rain gauge at the site indicates that mean annual precipitation is 13 inches. This is significantly lower than the nearest state climate station in Grangeville, Idaho. This disparity suggests that the temperature data available for Grangeville is not a reliable estimate for the Dug Bar site. The Snake River is the only natural water source on the site.

III. Methods

The methods utilized in the 2002 inventory generally follow those laid out in the Northern Semi-Arid Network Study Plan (Wright et. al. unpublished) and a previous network herpetological inventory (Shive and Peterson 2002). Methods and procedures were adapted to accommodate logistical constraints.

All locations provided in this report were collected as Universal Transverse Mercator (UTM) coordinates (Zone 11 &12) using a Garmin 12-channel Etrex hand-held GPS unit (Garmin International, Inc. Olathe, KS). The North American Datum of 1927 was used as the horizontal datum for all locations. Elevations were also collected using the GPS unit. UTM locations were collected at all of the survey sites including the starting points of small mammal transects, wire funnel trap deployment locations, wetland survey sites, and at points of incidental observations. All coordinates were collected with navigational accuracy of 18 m or less. In a few instances locations could not be recorded within the desired accuracy, due to topographical disruptions, and accuracy within 30 m was accepted and recorded.

Scientific and common names used in this report follow the Integrated Taxonomic Information System (ITIS). The ITIS follows closely the USGS Biological Resource Division's unpublished and expanded update of the 1987 Checklist of Vertebrates of the United States, the U.S. Territories, and Canada (ITIS 2003). All 2002 vertebrate documentations are added to the NPSpecies database that also follows ITIS. A key to the species status codes used in NPSpecies and the status of expected and unlikely species in the park is included in Appendix A.

A. Expected Species

Expected species lists were generated for each site in the Nez Perce National Historic Park included in the 2002 vertebrate inventory. Species were determined to be "expected" by using the following criteria: (1) the study site is within the species predicted range; (2) the elevation is comparable to species observations made at similar localities; (3) the appropriate habitat for the species exists within the site; and (4) the species' detectability was considered and given a likelihood rating. A species was determined to be "likely" to occur in the park if at least three of the criteria were supported. A species was classified as "possible" if it only met two of the criteria and if the detectability was "variable". A species was classified as "unlikely" if only one of the criteria was supported and if the detectability was "low". In order to thoroughly evaluate the species that were potentially occurring at these sites, several criteria were used to consider a species for the list. Appendix B contains summaries of each species' status based on these criteria.

A variety of reference materials were examined to determine species ranges, elevation tolerances, and habitat requirements and included the Digital Atlas of Idaho (2000), Montana Gap Analysis (1998), Atlas of Oregon Wildlife (2001), National Audubon

Society Field Guide to North American Mammals (1998), Amphibians of Oregon, Washington, and British Columbia (1996), Reptiles of the Northwest (2002), Mammals of the Rocky Mountains (2000), A Field Guide to Western Reptiles and Amphibians (1985), and Reptiles of Washington and Oregon (2000). Information on historic observations made by Nez Perce National Historical Park staff was also incorporated into the development of expected species lists. This process resulted in a total list of expected species for Nez Perce National Historical Park across all 5 sites included 6 amphibians, 8 reptiles, and 34 mammals. Tables 2 and 3 show the total expected species list and their status during the 2002 inventory. There were 28 expected species (2 amphibians, 4 reptiles, 22 mammals) identified for the Spalding site (Tables 4,5). There were 23 expected species (5 amphibians, 6 reptiles, 12 mammals) identified for White Bird Battlefield (Tables 6,7). There were 27 expected species (1 amphibian, 4 reptiles, 22 mammals) identified for the Heart of the Monster (Tables 7,8). There were 20 expected species (1 amphibian, 5 reptiles, 14 mammals) identified for the Bear Paw Battlefield (Tables 9,10). There were 13 expected species (1 amphibian, 5 reptiles, 7 mammals) identified for Dug Bar (Tables 11,12).

B. Sampling Site Selection

Using the information accumulated by the expected species list, sampling site selection and sampling techniques were derived. Survey sites were primarily concentrated in areas with suitable habitat for target species (i.e., lakes, ponds, riparian areas, forested areas, south-facing aspects). The locations of historic observations made by NPS personnel were also chosen for sampling sites as well, in order to maximize the possibility of encountering target species. An additional set of survey locations was also located in areas where animal activity was conspicuous (i.e., dens, game trails, cavities). Photo documentation was taken with a Nikon Coolpix E995 digital camera for each locality to provide managers and researchers with an accurate visual description of the area. These photographs may also be used as photo points by NPS staff in order to detect and document future changes in habitat.

C. Sampling Techniques

Surveys were conducted between March and August 2002. Sites were sampled at various times during this field season to detect different life stages of individuals and to document prime activity patterns of potential species. Following recommendations by Olson et al. (1997), all of the locations were sampled at least twice throughout the field season except Dug Bar. Dug Bar was only sampled once due to its remote location, difficult accessibility, and time constraints. Spalding was sampled on March 31-April 4, April 10-13, May 31-June 4, and August 13-15 for a total of seventeen sampling days. White Bird Battlefield was sampled on May 2, 6, 25, 28-31, and August 15-17 for a total of ten sampling days. Heart of the Monster (East Kamiah) was sampled on June 13-15 and August 17-19 for a total of six sampling days. Bear Paw Battlefield was sampled on June 7-9 and July 3-5 for a total of six sampling days. Dug Bar was sampled on June 25-28 for a total of four sampling days.

The search techniques that were used to obtain detection information were visual encounter surveys, dip netting, cover turning, road surveys, and a variety of mammal and herpetological trapping procedures. An array of environmental characteristics was collected at each sampling site as well. Each technique is described in further detail below.

1. Site Characteristics and Environmental Measurements

Each aquatic site sampled in the 2002 inventory was classified according to the National Wetlands Inventory (NWI) classification (Cowardin et al. 1979) criteria of wetland and deepwater habitats. The physical and biological characteristics of each lake, pond, or creek site were described using a standard form (Appendix C, form 1). Certain environmental measurements were observed and collected, such as radiation, wind speed, cloud cover, precipitation, air, and water temperature. An Oakton TDSTestr High+ was used to measure conductivity and an Oakton pH Testr 2 with ATC (Forestry Supply, Jackson, MS) was used to measure pH.

Each site was described using characteristics such as origin, drainage, site type, length, width, maximum depth, color, and turbidity. Site width and length were visually estimated and the depth was ranked into one of three categories (<1 m, 1-2 m, >2 m). Water temperature was taken within the shade at a depth of 1 cm using a mercury thermometer. Air temperature was also taken in the shade at a height of 1 m on the edge of the riparian zone. Some other wetland habitat characteristics such as primary substrate, percent emergent vegetation, emergent vegetation species, north shore characteristics, distance to forest edge, and forest tree species were all recorded on the data sheets.

The calibration of pH and conductivity meters was done on May 30th and on July 15th using buffer solutions. All waders, dip nets, and aquatic funnel traps were sterilized with a bleach solution (10-20%) after each site was surveyed. The cleaning of sampling gear was implemented to decrease the chances of spreading bacteria, pollutants, or disease throughout the study area.

Terrestrial sites included in small mammal transects and wire funnel trap locations had the following site and environmental characteristics recorded; UTM, transect bearing, topographic position, location description, general habitat description, and weather during the trap period (Appendix C, forms 2 and 3). Slope and aspect of each site were only recorded if they were applicable to a site. Notes were also made on the moon phase during mammal trapping activities. All traps were sterilized with a bleach solution (10-20%) after each trapping session in order to protect both the biologist and the animals.

2. Visual Encounter Surveys

This method was used quite frequently with a great deal of success, and included traveling throughout a locality searching for signs of amphibians, reptiles, small mammals, and bats. All habitat types and areas with suitable characteristics needed by

the target species were surveyed extensively. Examples of animal sign used to confirm species presence were tracks, scat, shed antlers, calls, and evidence of den sites. The surveys were conducted throughout the day and included nighttime hours for the detection of nocturnal or diurnal species that are commonly cryptic and secretive.

In addition to focused visual encounter surveys, many incidental observations of vertebrates were made during travel through study areas or during other inventory activities. Incidental observations of amphibian and reptile species were documented using a standard form for detection (Appendix C, form 4). A detailed description of the animal's location/behavior, topographic position, habitat type, and weather were recorded. Both air temperature and ground temperature were obtained for incidental observations of reptiles. Photographic documentation was also taken for representative species residing at each site.

Throughout the entire study, any potential sightings or future trapping localities for various bat species were recorded. This location information may be valuable for any future inventory or research on bats in the park.

3. Dip netting

Dip-nets were an effective tool for catching and observing all life stages of amphibians as well as some reptilian species. In lacustrine (e.g. lakes) and palustrine (e.g. pools, marsh) situations, all shorelines, pools, and near-shore waters were searched at a slow rate in order to maximize detection. Dip netting was particularly effective in areas with dense emergent vegetation. In these areas, the observer swept the dip-net every 2 meters, both in front of and on either side of the direction of travel.

4. Cover Turning

This method had a high rate of success and proved to be very helpful in detecting reptile and amphibian species. Large boulders, logs, and human-made structures are examples of objects that may be used when an animal takes to refuge. These objects were frequently turned over in all localities. Objects were carefully replaced after inspection and the same cover objects were never flipped repeatedly (e.g. every day) in order to minimize disturbance.

5. Road Surveys

Many reptiles can be found along roads, basking at the edges during the day (e.g. garter snakes) or on the road itself in the early evening (e.g. gopher snakes, rattlesnakes). The presence of these animals on roads is most likely related to thermoregulation. Paved and gravel roads were the most productive for the inventory. All observations were recorded on a standard form for the documentation of individual reptilian and amphibian species. Road surveys were conducted during daytime and twilight hours on roads within the study sites or adjacent to the boundary line by slowly driving with low headlight beams.

6. Trapping

Many different types of trapping methods were implemented during the 2002 inventory that targeted amphibians, reptiles, and mammals. Wire funnel traps and aquatic funnel traps were used to capture amphibian and reptile species. Sherman live traps (LFATDG, H.B. Sherman Traps Inc.), museum special snap traps, small mammal live traps (7 x 7 x 24 in) were used to capture mammals. Wire funnel traps were successful in detection of all three groups of animals. Pitfall traps with drift-fences were also employed but were unsuccessful in capturing vertebrates.

Wire Funnel Traps

These traps were placed along objects present at the sites (e.g. downed trees, boulders, machinery), which had the potential of directing animals into traps. These traps were placed in all types of habitat present at each locality to increase chances for trapping success. Small mammals were frequently captured in these traps when placed in proximity to water.

Aquatic Funnel Traps

Traps were placed partially submerged in wetlands to allow for excess air to reduce mortality. Aquatic funnel traps employ a holding chamber with two tapered mouths that channel organisms toward a small entrance to the trap interior. Once inside, organisms tend to aggregate around edges where they cannot escape from the trap. The commercially available 6mm (1/4 in) plastic mesh allowed water to circulate freely. To avoid losing traps, they were tethered to stakes, driven into the ground, then left over night, but checked at regular time intervals (not to exceed 24 hours).

Sherman Live Traps, Museum Special Snap Traps, Small Mammal Live Traps

Sherman live traps were deployed in combination with museum special snap traps in the study area to detect small mammals. Traps were placed along a line transect consisting of 5-10 stations with a Sherman live trap and a museum special snap trap. The stations were paced and marked with a flag every 10 m. All traps were baited with rolled oats, black-oil sunflower seeds, and peanut butter. Transects were pre-baited for 1-3 nights prior to opening of the trap line in order to increase trapping success. All traps were checked, closed, and reopened daily. The trapping period usually consisted of two consecutive trap nights. The small mammal live traps were baited with tuna and placed in a variety of locations depending on habitat and animal activity. These traps were checked and re-baited daily and deployed for at least two nights.

Pitfall Traps

This is a method that was both time and effort intensive and did not prove to be a successful survey tool during the 2002 inventory. 33 cm (13 in) pitfalls were placed in the ground with tops flush with the surface of the soil and covered to protect animals

from rain and sun. A 1.22 m (4 ft) drift fence was used in conjunction with two pitfall traps to intercept and divert the animals into the traps. The traps were usually placed in an area that had potential to route animals between water sources, rock outcrops, and other cover. These traps were checked twice a day in order to reduce mortality.

D. Data Management

All relevant information collected during the 2002 inventory was entered into Microsoft Excel for interpretation and analysis. Geographic locations of all Nez Perce National Historical Sites were stored and displayed using ArcMap and ArcView 3.2. Species status, abundance, residency, nativity, management priority, and exploitation concern information will be archived in the NPSpecies database.

IV. Results

A. Confirmed Species

A total of 14 species of amphibians and reptiles were expected to occur in at least one of the 5 Nez Perce National Historical Park sites included in the inventory. Four species of amphibians and 7 species of reptiles were confirmed during the 2002 inventory, representing 78% of the expected species. A total of 34 species of non-volant mammals were expected to occur in at least one of the Nez Perce National Historical Park sites. 28 species were confirmed in the park during 2002, representing 82% of the expected species. Tables 2 and 3 show the list of expected herpetofauna and mammals and their status during the 2002 inventory. Results at each of the 5 park sites were quite variable, however, and are treated separately in the following section. Survey effort is also detailed in the following sections.

B. Spalding

There were six small mammal transects deployed and four incidental observations of various species made at this site during the 2002 inventory (Figure 4). This effort resulted in the documentation of 22 (1 amphibian, 4 reptiles, and 17 mammals) of the 28 potentially occurring species in the Spalding site (Figures 2,3 and Tables 2,3). There were observations of two species of concern and/or sensitive species detected at Spalding. Lapwai Creek had about 100 western toad (*Bufo boreas*) tadpoles present during the second sampling session in August. There was a dried up carcass of an adult toad detected at the Spalding site near a conifer stand by the railroad tracks on the east end of the park, but no other evidence of adult individuals was detected. The river otter (*Lontra canadensis)* was observed swimming in the Clearwater River, which flows along the north end of the park boundary. The western harvest mouse (*Reithrodontomys megalotis)* was detected at this site and, while it is not a species of concern, is noteworthy because its presence at Spalding represents a modest range extension. Photo documentation of Lapwai Creek and the habitat along the Clearwater River are shown in Appendix D, representative photo 1.

C. White Bird Battlefield

There were four small mammal transects and three wire funnel traps deployed at this site. Eight incidental observations of amphibians and reptiles were also documented (figure 5). 19 (4 amphibians, 5 reptiles, and 10 mammals) of 23 potentially occurring species were detected within the White Bird Battlefield in 2002 (Figures 2,3 and Tables 4,5). There were observations of two species of concern and/or sensitive species, and one observation of an exotic species detected at Swartz Pond. The pond had both tadpole and adult lifestages of the western toad present during early sampling in May. The number of tadpoles was extremely abundant (>1000) and voucher samples were collected. The ringneck snake (*Diadophis punctatus)* is a critically imperiled species of concern for the state of Idaho, and the Bureau of Land Management lists it as a sensitive species. Two

juvenile snakes were found at the same location during this sampling session, but were detected on two separate occasions. Photographs were taken for voucher records that documented both observations. Swartz Pond had one large adult bullfrog (*Rana catebeiana*) present. There seemed to be some sort of bacterial growth on the pupil lens of the frog, the activity level of the frog was minimal, and its overall health was poor. The frog was not detected during later sampling of Swartz Pond in August. This pond also proved to be a popular breeding site for long-toed salamanders (*Ambystoma macrodactylum)* and adults were documented residing at this site for the duration of the summer.

D. Heart of the Monster

There were four small mammal transects and three wire funnel traps deployed at this site, and three incidental observations of amphibians and reptiles were documented (Figure 6). There were 18 (1 amphibian, 2 reptiles, and 15 mammals) of the 27 potentially occurring species detected within the Heart of the Monster site in 2002 (Figures 2,3 and Tables 6,7). A racer (*Coluber constrictor)* was detected but a GPS signal was unavailable for records. The Kamiah Pond had the highest abundance of bullfrogs throughout the entire study area (Figure 2). This exotic species is a successful, aggressive, territorial, and competitive amphibian. The large amount of tadpoles, metamorphs, juveniles, and adults present at the pond may explain the lack of other amphibian species. Management action is needed to eradicate this species, in order to increase species richness of amphibians. A dead western terrestrial garter snake (*Thamnophis elegans)* found near Kamiah Pond had distinct canine puncture holes the size of a small carnivore. During the surveys of this site, it was common to see several resident feral cats chasing birds and other animals within the park. A western harvest mouse was captured here in August and this location represents a significant range extension for this species.

E. Bear Paw Battlefield

There were seven small mammal transects and two pitfall traps deployed at this site, and only one incidental observation of a reptile documented (Figure 7). During 2002 there were 13 (0 amphibians, 1 reptile, and 12 mammals) of the 20 potentially occurring species detected within the Bear Paw Battlefield (Figures 2,3 and Tables 8,9). One prairie garter snake (*Thamnophis radix*) was found at the battlefield while conducting the second survey session in early July. The snake was found near the standing pools of water in Snake Creek.

F. Dug Bar Historic Site

There were five small mammal transects, five wire funnel traps, and two pitfall traps deployed at this site (Figure 8). No incidental observations of amphibians were documented directly at Dug Bar, but a western toad was found late at night on the road near the site (Figure 9). There were 8 (0 amphibians, 4 reptiles, and 4 mammals) of the 13 potentially occurring species detected within the Dug Bar site (Figures 2,3 and Tables

10,11). All four species of reptiles confirmed were detected through trapping and incidental observations (Figure 8). Dug Bar had the highest overall abundance of reptiles throughout the study (Figure 3). The two species with the highest occurrence were the racer and the western fence lizard (*Sceloporus occidentalis*). Racers were detected on several occasions, and were not found in close proximity to water. Five racer skin sheds were detected within clusters of medium sized rocks on a south-facing talus slope, which may be a den site. There were five western fence lizards detected at Dug Bar during the survey. Throughout the sampling session these lizards were present on rocks and in trees along the Snake River. There were different size and color phases observed at this site, which were photographed for documentation.

G. Bats

Although the 2002 Nez Perce National Historical Park inventory did not focus on confirming bat species, bat activity was noted and several roost sites were investigated incidental to other inventory activities. Night surveys were conducted at each of the inventory sampling sites for the duration of each sampling session in 2002. This resulted in the discovery of four sites where bat species were present. Bats were flying around feeding near the bridge over Lapwai Creek (Spalding) at about 9:30 pm in the August survey. Swartz Pond (White Bird) had bat species observed overhead at about 8:00 pm in the August survey. The weather during the early surveys of Bear Paw was extremely cold, but a little brown bat (*Myotis lucifugus*) was identified under a bridge about 2.4 km (1.5 mi) from the battlefield. The McBeth House, 0.5 miles from the Heart of the Monster, had approximately 50-75 individual bats detected and photographed. These bats resembled Townsend's big-eared bats (*Corynorhinus townsendii*) but a positive identification was not obtained. Bat surveys have never been conducted in any of the five Nez Perce National Historical Park sites included in the 2002 inventory, but enough activity was observed that a future bat inventory is warranted.

H. Abundance

The species with the highest measurable relative abundance during this survey were the western toad, racer, western terrestrial garter snake, coyote (*Canis latrans*), and the deer mouse (*Peromyscus maniculatus*) (Figures 2,3 and Table 13). The number of western toads was estimated when tadpoles were present to total at least 1000 individuals (Table 12). The racer and western terrestrial garter snake both had an abundance of seven individuals detected within the survey (Table 12). The mammal species were difficult to establish actual relative abundance of animals detected through numbers. After recording the presence of each mammal species at a given location, the species were then examined for occurrence throughout all of the Nez Perce sites and the results are shown in table 13.

V. Management Recommendations

The Nez Perce National Historical Park consists of many small and widely separated sites, each with their own management concerns and challenges. Management strategies should be made site specific rather than park-wide. Site-specific biological resource concerns should be prioritized so that the most critical problems are addressed first. From a vertebrate resource perspective, priority ranking should consider confirmed species of concern, their population status, and a variety of possible threats, such as public visitation and exotic species impacts. The presence of exotic species, such as bullfrogs, probably poses the most pressing threat to many native herpetofauna in the park. Exotic weedy vegetation also poses a significant threat to both herpetofauna and mammals. An additional factor to consider in prioritizing management strategies is that of feasibility. Overly expensive and disruptive management strategies that have a low probability of success should be avoided. While addressing threats to confirm park species is most important, several unique and potentially vulnerable species that were not confirmed in the 2002 inventory deserve further attention. Nez Perce National Historical Park staff are an invaluable resource in this regard. Park staffs are "on the ground" and intimately familiar with the park, making them the best choice to fill in the remaining gaps in "probably present" species in the park. Every effort should be made to recruit park staff to continue searching for probably present species. Finally, the vital-signs monitoring phase of the I&M project will provide a crucial source of funding, expertise, and momentum for sustained management and conservation efforts for biological resources in the park in the future. The following sections address more specific management concerns for each of the five sites included in the 2002 inventory.

A. Spalding

Several detected and undetected species at this site are of management concern. Lapwai Creek provides the only suitable late summer breeding habitat for western toads, and preservation of future populations of this sensitive species relies on the persistence of proper site characteristics. This site had six (1 amphibian, 5 mammal) species that could possibly occur that were not detected (Tables 2,3). The detection rate for amphibians and mammals were lower than anticipated, and further searching should easily increase the number of documented species at this site. The Columbia spotted frog (*Rana lutieventris)* is most likely present within the park, although detection of this species was not confirmed. While doing early spring sampling along the Clearwater River, a frog was seen jumping into a pool of water. A positive identification of this frog was not made but, based on habitat, time of year, and gestalt observation, it seems possible that this was a spotted frog. The overflow pools that form along the Clearwater River should be thoroughly searched in the spring using visual encounter surveys in order to detect this species. As far as mammal species are concerned, there are several species that are possibly present yet were not detected during the 2002 survey. Elk (*Cervus elaphus*) have been seen in the area and may migrate through the park during fall, winter, and spring. Early winter may be an opportune time for detection of this species. For the remainder of

the possibly occurring mammal species, an intensive trapping session and a winter track survey is suggested.

B. White Bird Battlefield

This site had both exotic and native species present in 2002. Although there was only a single bullfrog detected during the survey, this site should be monitored for increased bullfrog presence. The species richness and diversity at this site was the highest of any location in the 2002 Nez Perce National Historical Park inventory. If bullfrogs are only beginning to encroach into the site, then it may be possible to stop invasion before populations of native herpetofauna are impacted. The western toad population seemed to be abundant at this site, and monitoring the number of egg masses and tadpole production in the future is recommended. Further surveys of reptiles may confirm the common garter snake (*Thamnophis sirtalis*), whose habitat requirements resemble characteristics present in the site (Appendix B). The detection of other mammal species may be increased if winter surveys are conducted.

C. Heart of the Monster

This site is important because of the large bullfrog population present at Kamiah Pond. This species may overwinter in a single locality and reproductive success appears to be high. Considering these factors, an attempt should be made to prevent the species from spreading into the surrounding wetlands. Electroshocking of individuals using backpack shockers could be an effective way of collecting large quantities of bullfrogs. This eradication method would take several visits to the pond, but would certainly be beneficial for native amphibians. The other management concern at Heart of the Monster is the presence of feral cats. These animals kill avian and reptile species native to the park and an attempt should be made to eliminate them from the park.

D. Bear Paw Battlefield

There were several possibly present species at this site. The tiger salamander (*Ambystoma trigrinum*), racer (*Coluber constrictor*), gopher snake (*Pituophis catenifer*), and sagebrush vole (*Lemniscus curtatus*) are species that were expected to occur at Bear Paw Battlefield. The tiger salamander and the gopher snake have been observed within five miles of the park, and future detection of this species in the park is promising. Early summer and fall would be ideal times to detect the tiger salamander due to breeding and life history characteristics. The habitat and range requirements for the racer and the sagebrush vole are present, but weather conditions during both sampling sessions in 2002 were not favorable for detection of these species. Future sampling of Snake Creek should be made during periods of increased water flow and when air temperatures are around 20-30° C.

E. Dug Bar

This site is not favorable for amphibian populations, due to its location and temperature, but the western toad may be present. This species was found outside of the site boundary, and a population may exist in or near the park (Figure 9). Since this species is mostly nocturnal, night surveys should be conducted during warm months.

Acknowledgements

The 2002 Nez Perce National Historical Park mammal and herpetological inventory was made possible through a cooperative agreement between the NPS Northern Semi-Arid Network and University of Idaho Department of Fish and Wildlife Resources. We would like to thank Gerry Wright of USGS Idaho Cooperative Wildlife Research Unit and the Nez Perce National Historical Park for providing leadership, direction, and enthusiasm for the project. Special thanks go also to Chuck Peterson, Dan Foster, Jason Lyon, and Jack Sullivan's Biology Laboratory for resource materials, species identification, and information regarding natural history of selected species. The NPS personnel at Spalding and Bear Paw provided invaluable assistance with species observation reports, sampling assistance, and cooperation during the entire study.

References

Corkran, C.C. and C. Thoms. 1996. Amphibians of Oregon, Washington, and British Columbia. Lone Pine Publishing, Canada.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. United States Fish and Wildlife Service Bulletin FWS/OBS 79/31.

Csuti, B., T.A. O'Neil, M.M. Shaughnessy, E.P. Gaines, and J.C. Hak. 2001. Atlas of Oregon Wildlife. Oregon State University Press, Oregon.

Digital Atlas of Idaho. 2000. Digital atlas of Idaho: Idaho's natural history online. Idaho Museum of Natural History. Idaho State University, Pocatello, Idaho. http://imnh.isu.edu/digitalatlas (retrieved 3/23/02).

Dixon, R. In Press. Bird Survey for the Nez Perce National Historical Park.

Fisher, C., D. Pattie, T. Hartson. 2000. Mammals of the Rocky Mountains. Lone Pine Publishing, Canada.

Fisher, F.B, J.C. Winne, M.M. Thornton, T.P. Tady, Z. Ma, M.M. Hart, and R.L. Redmond. 1998. Montana Gap Analysis Project. Montana Cooperative Wildlife Research Unit, Montana.

Groves, C. R., B. Butterfield, A. Lippincott, B. Csuti, and J.M. Scott. 1997. Atlas of Idaho's Wildlife. The Idaho Department of Fish and Game, The Nature Conservancy, & Idaho Gap Analysis Project, joint publishers.

Homer, C.G., R.D. Ramsey, T.C. Edwards Jr., and A. Falconer. 1997. Landscape cover-type modeling using a multiscene thematic mapper mosaic. Photogrammetric Engineering and Remote Sensing 63:59-67.

Idaho State Climate Services. 2003. Idaho 1971-2000 normals. Department of Biological and Agricultural Engineering, University of Idaho, Moscow, ID. http://snow.ag.uidaho.edu/2000_normals/index.html (retrieved 3/25/03).

ITIS. 2003. Integrated Taxonomic Information System On-Line Database System. U.S. Department of Agriculture. http://www.itis.usda.gov. (retrieved 1/10/03).

Monello, R. J. and G.R. Wright. 1998. Exotic Pest Plant Inventory, Mapping, and Priorities for Control in Parks in the Pacific Northwest, and Initial Bird and Small Mammal Survey Results for Parks in the Pacific Northwest. USGS Idaho Cooperative Fish and Wildlife Research Unit, University of Idaho. Moscow, Idaho.

Olson, D.H., W.P. Leonard, R.B. Bury. 1997. Sampling Amphibians in Lentic Habitats: Methods and Approaches for the Pacific Northwest. Society for Northwestern Vertebrate Biology, Washington.

Redmond, R.L., Z. Ma, T.P. Tady, J.C. Winne, J. Schumacher, J. Troutwine, and S.W. Holloway. 1996. Mapping existing vegetation and land cover across western Montana and northern Idaho. Wildlife Spatial Analysis Laboratory, Missoula, Montana.

Shive, J.P. and C.R. Peterson. 2001. Herpetological Inventory of the City of Rocks National Reserve. Herpetology Laboratory, Department of Biological Sciences, Idaho State University. Pocatello, Idaho.

St. John, A. D. 2002. Reptiles of the Northwest. Lone Pine Publishing, Canada.

Storm, R.M. and W.P. Leonard. 1995. Reptiles of Washington and Oregon. Seattle Audubon Society, Washington.

Western Regional Climate Center. 2003. Montana Climate Summaries. Desert Research Institute, Reno, Nevada. http://www.wrcc.dri.edu/summary/climsmmt.html (retrieved 3/26/2003).

Whitaker, J.O. 1998. National Audubon Society Field Guide to North American Mammals. Alfred A. Knopf, New York.

Wright, G.R., L.Garrett, and D. Foster. Unpublished. A Study Plan to Inventory Vascular Plants and Vertebrates in NPS Units in the Northern Semi-Arid Network. University of Idaho Department of Fish and Wildlife. Moscow, Idaho.

Tables

Table 1. Idaho Vegetation and Land Cover and Montana Land Cover Atlas Classification System categories found within the Nez Perce National Historical Sites.

Survey Site	Classification Number	Classification Categories	Sub-Category Code	Classification Sub-Categories	Habitat Type
Spalding	3000	Non-Forested Lands	31XX	Grassland	3102 Disturbed Grassland
	4000	Forest Uplands	43XX	Mixed Needleleaf/Broadleaf Forest	4301 Mixed Needleleaf/Broadleaf Forest
Kamiah	3000	Non-Forested Lands	31XX	Grassland	3102 Disturbed Grassland
	6000	Riparian and Wetland Areas	61XX	Forested Riparian	6202 Shrub Dominated Riparian
White Bird	3000	Non-Forested Lands	31XX	Grassland	3102 Disturbed Grassland
	3000	Non-Forested Lands	31XX	Grassland	3109 Perennial Grassland
	3000	Non-Forested Lands	32XX	Mesic Shrublands	3201 Mesic Upland Shrubs
Bear Paw					3110 Altered Herbaceous
					3350 Sagebrush
					6300 Shrub Riparian
Dug Bar	3000	Non-Forested Lands	31XX	Grassland	3102 Disturbed Grassland
	3000	Non-Forested Lands	33XX	Xeric Shrublands	3305 Mountain Big Sagebrush

Table 2. The list of amphibians and reptiles expected to occur in at least 1 of the 5 sites included in the 2002 Nez Perce National Historical Park mammal and herpetological inventory.

Genus	Species	Common Name	Expected	Confirmed	Sites[a]
Ambystoma	macrodactylum	Long-toed Salamander	1	1	W,D
Ambystoma	tigrinum	Tiger Salamander	1	0	
Bufo	boreas	Western Toad	1	1	S,W
Hyla	regilla	Pacific Treefrog	1	1	W
Rana	lutieventris	Columbia Spotted Frog	1	0	
Rana	catesbeiana	Bullfrog	1	1	W,H
Sceloporus	occidentalis	Western Fence Lizard	1	1	D
Diadophis	punctatus	Ring-necked Snake	1	1	W
Coluber	constrictor	Racer	1	1	S,W,H,D
Pituophis	catenifer	Gopher Snake	1	1	S,W,D
Thamnophis	sirtalis	Common Garter Snake	1	0	
Thamnophis	elegans	Western Terrestrial Garter Snake	1	1	S,W,H
Thamnophis	radix	Plains Garter Snake	1	1	B
Crotalus	viridis	Western Rattlesnake	1	1	S,W,D
Total			**14**	**11**	
% Confirmed				**0.79**	

[a] The sites field refers to the 5 individual sites included in the Nez Perce National Historical Park inventory: S=Spalding, W=White Bird Battlefield, H=Heart of the Monster, B=Bear Paw Battlefield, D=Dug Bar.

Table 3. The list of mammals (excluding bats) expected to occur in at least 1 of the 5 sites included in the 2002 Nez Perce National Historical Park mammal and herpetological inventory.

Genus	Species	Common Name	Expected	Confirmed	Sites[a]
Sorex	vagrans	Vagrant Shrew	1	1	W,H
Sorex	cinereus	Masked Shrew	1	0	
Sylvilagus	nuttallii	Mountain Cottontail	1	1	S
Lepus	americanus	Snowshoe Hare	1	0	
Lepus	townsendii	White-tailed Jackrabbit	1	1	B
Tamias	amoenus	Yellow-pine Chipmunk	1	0	
Spermophilus	columbianus	Columbian Ground Squirrel	1	0	
Spermophilus	richardsonii	Richardson's Ground Squirrel	1	1	B
Tamiasciurus	hudsonicus	Red Squirrel	1	1	S
Marmota	flaviventris	Yellow-bellied Marmot	1	1	S,W
Thomomys	talpoides	Northern Pocket Gopher	1	1	S,W,H
Castor	canadensis	Beaver	1	1	S,H
Reithrodontomys	megalotis	Western Harvest Mouse	1	1	S,H
Peromyscus	maniculatus	Deer Mouse	1	1	S,W,H,B,D
Neotoma	cinerea	Bushy-tailed Woodrat	1	1	W,B
Clethrionomys	gapperi	Southern Red-backed Vole	1	1	H
Microtus	longicaudus	Long-tailed Vole	1	1	H
Microtus	pennsylvanicus	Meadow Vole	1	1	H,B
Lemmiscus	curtatus	Sagebrush Vole	1	0	
Ondatra	zibethicus	Common Muskrat	1	1	S,H
Canis	latrans	Coyote	1	1	S,W,H,B,D
Vulpes	vulpes	Red Fox	1	1	S,B
Procyon	lotor	Common Raccoon	1	1	S,H
Mustela	frenata	Long-tailed Weasel	1	0	H
Mustela	vison	Mink	1	1	S,H
Taxidea	taxus	American Badger	1	1	S,W,B
Lutra	canadensis	River Otter	1	1	S
Mephitis	mephitis	Striped Skunk	1	1	S,B
Lynx	rufus	Bobcat	1	1	S,W
Cervus	elaphus	Elk	1	1	W
Odocoileus	hemionus	Mule Deer	1	1	H,B,D
Odocoileus	virginianus	White-tailed Deer	1	1	S,W,H,B
Antilocapra	americana	Pronghorn	1	1	B
Ovis	canadensis	Bighorn Sheep	1	1	D
Total			**34**	**28**	
% Confirmed				**0.82**	

[a] The sites field refers to the 5 individual sites included in the Nez Perce National Historical Park inventory: S=Spalding, W=White Bird Battlefield, H=Heart of the Monster, B=Bear Paw Battlefield, D=Dug Bar.

Table 4. Spalding amphibian and reptile species summary table. This table provides concise information about potential and observed amphibian and reptile species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed Amphibians								
Bufo boreas	western toad	S, SC	Limited	Abundant	Museum Specimen	Visual Encounter	Juvenile	Present
Possible Amphibians								
Rana lutieventris	columbia spotted frog							
Confirmed Reptiles								
Coluber constrictor	racer		Limited	Rare		Incidental Observation	Adult	Present
Pituophis catenifer	gopher snake		Intermediate	Rare	Photograph	Incidental Observation	Juvenile, Adult	Present
Thamnophis elegans	western terrestrial garter snake		Limited	Rare	Photograph	Incidental Observation	Adult	Present
Crotalus viridis	western rattlesnake		Limited	Rare		Contributed Observation	Adult	Present
No Possible Reptiles								
Classification Information:		Based on ranking from the Idaho Conservation Data Center 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	Techniques Employed: Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation	Life Stages: Juveniles Adults	
		S(BLM)= Sensitive Species	* Based on this survey	* Based on this survey				
		SC(IDFG)= Species of Special Concern	Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 5. Spalding mammal species summary table. This table provides concise information about potential and observed mammal species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur, but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed								
Sylvilagus nattallii	Nuttall's/ mountain cottontail		Intermediate	Uncommon		Incidental Observation	Juvenile, Adult	Present
Tamiasciurus hudsonicus	red squirrel		Intermediate	Common		Tracks/dens/scat		Present
Marmota flaviventris	yellow-bellied marmot		Limited	Rare		Incidental Observation	Adult	Present
Thomomys talpoides	northern pocket gopher		Widespread	Abundant		Tracks/dens/scat		Present
Castor canadensis	American beaver		Intermediate	Rare		Tracks/dens/scat		Present
Reithrodontomys megalotis	western harvest mouse		Widespread	Uncommon		Trapping	Juvenile, Adult	Present
Peromyscus maniculatus	deer mouse		Widespread	Abundant		Trapping	Juvenile, Adult	Present
Ondatra zibethicus	common muskrat		Limited	Rare		Tracks/dens/scat		Present
Canis latrans	coyote		Widespread	Common		Incidental Observation		Present
Vulpes vulpes	red fox		Limited	Rare		Contributed Observation		Present
Procyon lotor	common raccoon		Limited	Uncommon		Incidental Observation	Juvenile, Adult	Present
Mustela vison	mink		Limited	Rare		Incidental Observation	Adult	Present
Taxidea taxus	American badger		Limited	Rare		Tracks/dens/scat		Present
Lontra canadensis	river otter	SC	Limited	Rare		Incidental Observation	Adult	Present
Mephitis mephitis	striped skunk		Limited	Rare		Incidental Observation	Adult	Present
Lynx rufus	bobcat		Limited	Rare		Contributed Observation	Adult	Present
Odocoileus virginianus	white-tailed deer		Intermediate	Uncommon		Incidental Observation	Juvenile, Adult	Present

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Possible								
Sorex vagrans	vagrant shrew							
Neotoma cinerea	bushy-tailed woodrat							
Microtis pennsylvanicus	meadow vole							
Mustela frenata	long-tailed weasel							
Cervus elaphus	elk							
Classification Information:		Based on ranking from the Idaho Conservation Data Center 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	*Techniques Employed:* Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation Tracks/dens/scat Trapping	Life Stages: Juveniles Adults	
		S(BLM)= Sensitive Species	* Based on this survey	* Based on this survey				
		SC(IDFG)= Species of Special Concern	Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 6. White Bird Battlefield amphibian and reptile species summary table. This table provides concise information about potential And observed amphibian and reptile species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed Amphibians								
Ambystoma macrodactylum	long-toed salamander		Limited	Abundant	Museum Specimen, Photograph	Visual Encounter	Juvenile, Adult	Present
Bufo boreas	western toad	S, SC	Limited	Abundant	Museum Specimen, Photograph	Visual Encounter	Juvenile, Adult	Present
Hyla regilla	pacific treefrog		Limited	Abundant	Museum Specimen, Photograph	Visual Encounter	Juvenile, Adult	Present
Rana catebeiana	bullfrog		Limited	Rare	Photograph	Visual Encounter	Adult	Present
Possible Amphibians								
Rana lutieventris	columbia spotted frog							
Confirmed Reptiles								
Diadophis puncatus	ringneck snake	S,SC	Limited	Rare	Photograph	Visual Encounter	Juvenile	Present
Coluber constrictor	racer		Limited	Rare		Incidental Observation	Adult	Present
Pituophis catenifer	gopher snake		Limited	Rare	Photograph	Incidental Observation	Juvenile	Present
Thamnophis elegans	western terrestrial garter snake		Intermediate	Uncommon	Photograph	Visual Encounter, Incidental Observation	Juvenile, Adult	Present
Crotalus viridis	western rattlesnake		Intermediate	Rare	Photograph	Visual Encounter, Incidental Observation, Road Driving	Adult	Present
Possible Reptiles								
Thamnophis sirtalis	common garter snake							
Classification Information:		Based on ranking from the Idaho Conservation Data Center 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	Techniques Employed: Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation	Life Stages: Juveniles Adults	
		S(BLM)= Sensitive Species	* Based on this survey	* Based on this survey				
		SC(IDFG)= Species of Special Concern	Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 7. White Bird mammal species summary table. This table provides concise information about potential and observed mammal species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur, but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed								
Sorex vagrans	vagrant shrew		Limited	Rare		Trapping		Present
Marmota flaviventris	yellow-bellied marmot		Limited	Uncommon		Contributed Observation	Adult	Present
Thomomys talpoides	northern pocket gopher		Widespread	Abundant		Tracks/dens/scat		Present
Peromyscus maniculatus	deer mouse		Widespread	Abundant		Trapping	Juvenile, Adult	Present
Neotoma cinerea	bushy-tailed woodrat		Widespread	Abundant		Incidental Observation	Adult	Present
Canis latrans	coyote		Widespread	Common		Tracks/dens/scat		Present
Taxidea taxus	american badger		Intermediate	Uncommon		Incidental Observation		Present
Lynx rufus	bobcat		Limited	Rare		Contributed Observation	Adult	Present
Cervus elaphus	elk		Limited	Rare	Photograph	Incidental Observation	Adult	Present
Odocoileus virginianus	white-tailed deer		Widespread	Abundant		Incidental Observation	Juvenile, Adult	Present
Possible								
Spermophilus columbianus	columbian ground squirrel							
Mustela frenata	long-tailed weasel							
Classification Information:		Based on ranking from the Idaho Conservation Data Center 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	*Techniques Employed:* Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation Tracks/dens/scat Trapping	Life Stages: Juveniles Adults	
		S(BLM)= Sensitive Species	* Based on this survey	* Based on this survey				
		SC(IDFG)= Species of Special Concern	Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 8. Heart of the Monster amphibian and reptile species summary table. This table provides concise information about potential and observed amphibian and reptile species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed Amphibians								
Rana catesbeiana	bullfrog		Intermediate	Abundant	Museum Specimen	Visual Encounter	Juvenile, Adult	Present
No Possible Amphibians								
Confirmed Reptiles								
Coluber constrictor	racer		Limited	Rare		Incidental Observation	Adult	Present
Thamnophis elegans	western terrestrial garter snake		Intermediate	Uncommon	Museum Specimen	Visual Encounter	Adult	Present
Possible Reptiles								
Pituophis catenifer	gopher snake							
Thamnophis sirtalis	common garter snake							
Classification Information:		Based on ranking from the Idaho Conservation Data Center 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	Techniques Employed: Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation	Life Stages: Juveniles Adults	
		S(BLM)= Sensitive Species	* Based on this survey	* Based on this survey				
		SC(IDFG)= Species of Special Concern	Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 9. Heart of the Monster mammal species summary table. This table provides concise information about potential and observed mammal species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur, but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed								
Sorex vagrans	vagrant shrew		Limited	Rare		Trapping		Present
Thomomys talpoides	northern pocket gopher		Widespread	Abundant		Visual Encounter		Present
Castor canadensis	american beaver		Intermediate	Rare		Tracks/dens/scat		Present
Reithrodontomys megalotis	western harvest mouse		Limited	Rare		Trapping	Adult	Present
Peromyscus maniculatus	deer mouse		Widespread	Common		Trapping	Juvenile, Adult	Present
Clethrionomys gapperi	southern red-backed vole		Limited	Rare		Incidental Observation	Adult	Present
Microtus longicaudus	long-tailed vole		Intermediate	Rare		Trapping	Adult	Present
Microtus pennsylvanicus	meadow vole		Widespread	Uncommon		Trapping	Juvenile, Adult	Present
Ondatra zibethicus	common muskrat		Limited	Rare		Visual Encounter	Adult	Present
Canis latrans	coyote		Intermediate	Uncommon		Visual Encounter		Present
Procyon lotor	common raccoon		Limited	Rare		Tracks/dens/scat	Adult	Present
Mustela frenata	long-tailed weasel		Limited			Tracks/dens/scat		Present
Mustela vison	mink		Limited			Tracks/dens/scat		Present
Odocoileus hemionus	mule deer		Limited	Rare		Incidental Observation	Adult	Present
Odocoileus virginianus	white-tailed deer		Limited	Uncommon		Incidental Observation	Juvenile, Adult	Present

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Possible								
Sorex cinereus	masked shrew							
Lepus americanus	snowshoe hare							
Tamias amoenus	yellow pine chipmunk							
Spermophilus columbianus	columbian ground squirrel							
Tamiasciurus hudsonicus	red squirrel							
Lontra canadensis	river otter							
Mephitis mephitis	striped skunk							
Classification Information:		Based on ranking from the Idaho Conservation Data Center 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	*Techniques Employed:* Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation Tracks/dens/scat Trapping	Life Stages: Juveniles Adults	
		S(BLM)= Sensitive Species	* Based on this survey	* Based on this survey				
		SC(IDFG)= Species of Special Concern	Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 10. Bear Paw Battlefield amphibian and reptile species summary table. This table provides concise information about potential and observed amphibian and reptile species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
No Confirmed Amphibians								
Possible Amphibians								
Ambystoma tigrinum	tiger salamander							Probably Present
Confirmed Reptiles								
Thamnophis radix	plains garter snake		Limited	Rare	Photograph	Visual Encounters	Adult	Present
Possible Reptiles								
Coluber constrictor	Racer							Probably Present
Pituophis catenifer	gopher snake							Probably Present
Thamnophis elegans	western terrestrial garter snake							Probably Present
Crotalus viridis	western rattlesnake							Probably Present
Classification Information:			Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	*Techniques Employed*: Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation	Life Stages: Juveniles Adults	
			* Based on this survey	* Based on this survey				

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
			Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 11. Bear Paw mammal species summary table. This table provides concise information about potential and observed mammal species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of Voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur, but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed								
Lepus townsendii	white-tailed jack rabbit		Widespread	Uncommon	Skull	Road Driving	Adult	Present
Spermophilus richardsonii	Richardson's ground squirrel		Widespread	Abundant		Road Driving, Trapping	Juveniles, Adults	Present
Peromyscus maniculatus	deer mouse		Widespread	Abundant		Trapping	Juveniles, Adults	Present
Neotoma cinerea	bushy-tailed woodrat		Limited	Uncommon		Incidental Observation		Present
Microtus pennsylvanicus	meadow vole		Widespread	Uncommon		Trapping	Juveniles, Adults	Present
Canis latrans	coyote		Intermediate	Abundant	No	Visual Encounters, Incidental Observation		Present
Vulpes vulpes	red fox		Limited			Track/dens/scat		Present
Taxidea taxus	american badger		Limited			Track/dens/scat		Present
Mephitis mephitis	striped skunk		Limited	Uncommon	Skull	Incidental Observation	Adult	Present
Odocoileus hemionus	mule deer		Intermediate	Common		Incidental Observation	Adult	Present
Odocoileus virginianus	white-tailed deer		Intermediate	Common		Incidental Observation	Adult	Present
Antilocapra americana	pronghorn		Widespread	Abundant	No	Visual Encounters, Incidental Observation	Juveniles, Adults	Present
Possible								
Thomomys talpoides	northern pocket gopher							
Lemmiscus curtatus	sagebrush vole							

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Classification Information:			Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	*Techniques Employed:* Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation Tracks/dens/scat Trapping	Life Stages: Juveniles Adults	
			* Based on this survey	* Based on this survey				
			Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 12. Dug Bar amphibian and reptile species summary table. This table provides concise information about potential and observed amphibian and reptile species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
No Confirmed Amphibians								
Possible Amphibians								
Bufo boreas	western toad	S						
Confirmed Reptiles								
Sceloporus occidentalis	western fence lizard		Widespread	Uncommon	Photograph	Incidental Observation	Adult	Present
Coluber constrictor	racer		Widespread	Uncommon	Photograph	Funnel Trap, Visual Encounter	Adult	Present
Pituophis catenifer	gopher snake		Limited	Rare	Photograph	Incidental Observation	Adult	Present
Crotalus viridis	western rattlesnake		Widespread	Uncommon	Photograph	Incidental Observation	Adult	Present
Possible Reptiles								
Thamnophis elegans	western terrestrial garter snake							
Classification Information:		Based on ranking from the Oregon Natural Heritage Program 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	Techniques Employed: Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation	Life Stages: Juveniles Adults	
		S= Sensitive Species	* Based on this survey	* Based on this survey				
			Found in at least: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 13. Dug Bar mammal species summary table. This table provides concise information about potential and observed species with their corresponding legal status, and summarizes the study results by distribution, estimated abundance, type of voucher taken, successful survey techniques, and the observed life stages. See Appendix B for other species that may occur, but researchers on this project judged not likely to occur.

Scientific Name	Common Name	Conservation Status	Distribution*	Estimated Abundance*	Voucher	Successful Sampling Techniques*	Comments	Park Status
Confirmed								
Peromyscus maniculatus	deer mouse		Intermediate	Rare		Trapping	Adult	Present
Canis latrans	coyote		Intermediate			Tracks/dens/scat		Present
Odocoileus hemionus	mule deer		Limited	Uncommon		Visual Observation	Juvenile, Adult	Present
Ovis canadensis	bighorn sheep	S	Limited	Uncommon		Visual Observation	Juvenile, Adult	Present
Possible								
Marmota flaviventris	yellow-bellied marmot							
Thomomys talpoides	northern pocket gopher							
Neotoma cinerea	bushy-tailed woodrat							
Classification Information:		Based on ranking from the Oregon Natural Heritage Program 2002	Widespread (3) Intermediate (2) Limited (1)	Abundant (>10) Common (6-10) Uncommon (3-5) Rare (1-2)	Photograph Museum Specimen	*Techniques Employed:* Visual Encounters Road Driving Funnel Traps Incidental Observation Contributed Observation Tracks/dens/scat Trapping	Life Stages: Juveniles Adults	
		S= Sensitive Species	* Based on this survey	* Based on this survey				
			Found in: 3 locations 2 locations 1 location	>10 individuals 6-10 individuals 3-5 individuals 1-2 individuals				

Table 14. The number of amphibian and reptile species detected at each site through sign (tracks, den sites, scat, calls, etc.), trapping, and/or direct observation.

		Spalding	**White Bird**	**Kamiah**	**Bear Paw**	**Dug Bar**
Amphibians	western toad	100 (est. #)	1000 (est. #)			
	pacific treefrog		22			
	long-toed salamander		200 (est. #)			
	bullfrog		1	1000 (est. #)		
Reptiles	racer (genus)	1	1	1		4
	western terrestrial garter snake	1	3	3		
	western rattlesnake	1	2			3
	gopher snake	2	1			1
	plains garter snake				1	
	ringneck snake		2			
	western fence lizard					5

Table 15. The number of mammal species detected at each site through sign (tracks, den sites, scat, calls, etc.), trapping, and/or direct observation. Species in bold were most frequently detected.

		Spalding	White Bird	Kamiah	Bear Paw	Dug Bar	Total # of Sites Detected
Mammals	**american badger**	sign	sign		sign		**3**
	american beaver	sign		sign			2
	bobcat	direct observation	direct observation				1
	bushy-tailed woodrat		direct observation		sign		1
	common muskrat	sign		sign			2
	common raccoon	direct observation		sign			2
	coyote	sign	direct observation	direct observation	sign	sign	**5**
	deer mouse	18	32	8	31	2	**5**
	elk		direct observation				1
	least weasel			sign			1
	long-tailed vole			2			1
	meadow vole			4	11		2
	mink	direct observation		direct observation			2
	mule deer			direct observation	direct observation	direct observation	**3**
	northern pocket gopher	direct observation	sign	sign			**3**
	northern river otter	direct observation					1
	nuttall's/ mountain cottontail	direct observation					1
	pronhorn antelope				direct observation		1
	red fox	direct observation			sign		2
	red squirrel	sign					1
	richardson's ground squirrel				4		1
	southern red-backed vole			1			1
	striped skunk	direct observation			sign		2
	vargrant shrew		1	1			2
	western harvest mouse	4		1			2
	white-tailed deer	direct observation	direct observation	direct observation	direct observation		**4**
	white-tailed jack rabbit				direct observation		1
	yellow-bellied marmot	sign	direct observation				2

Figures

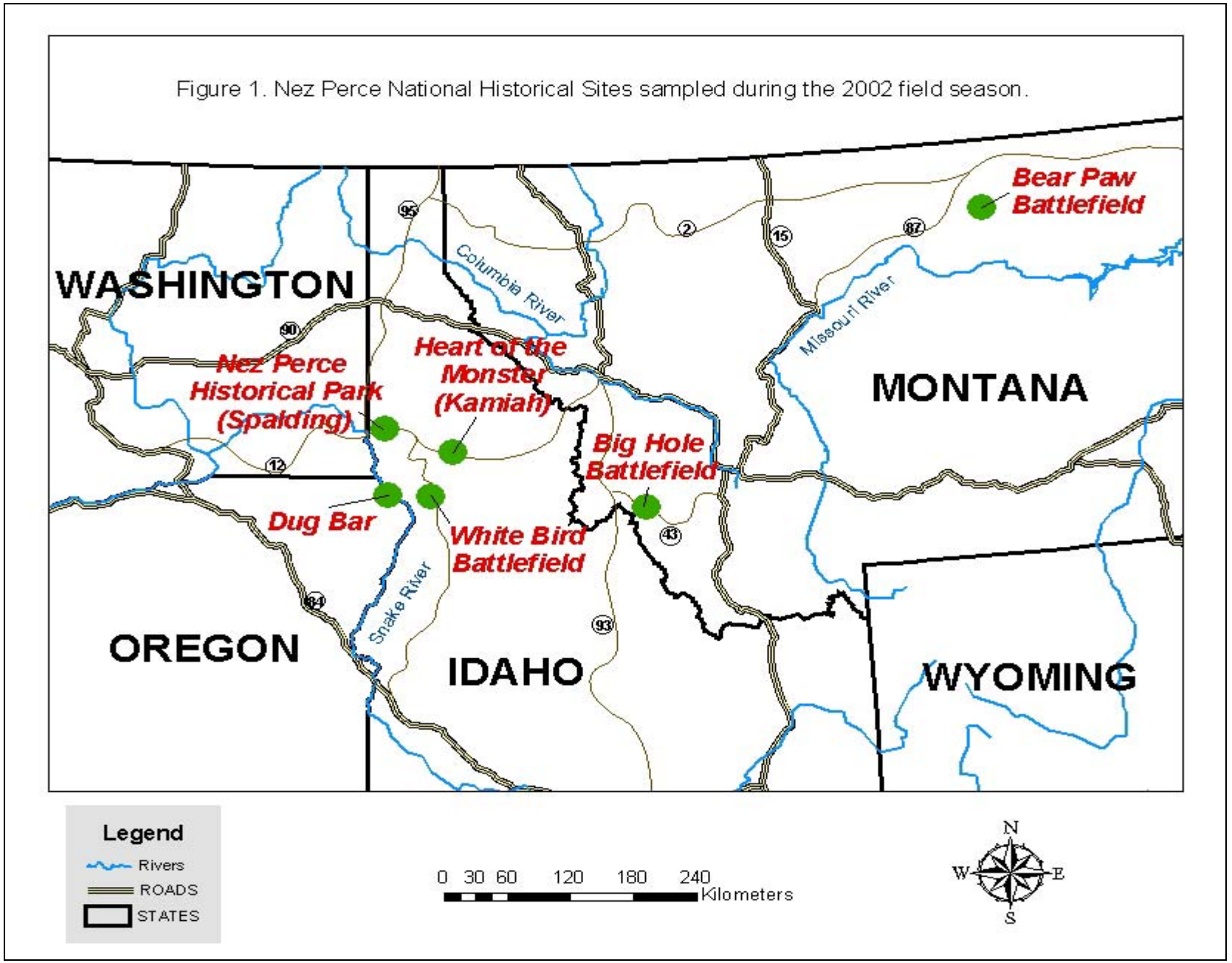
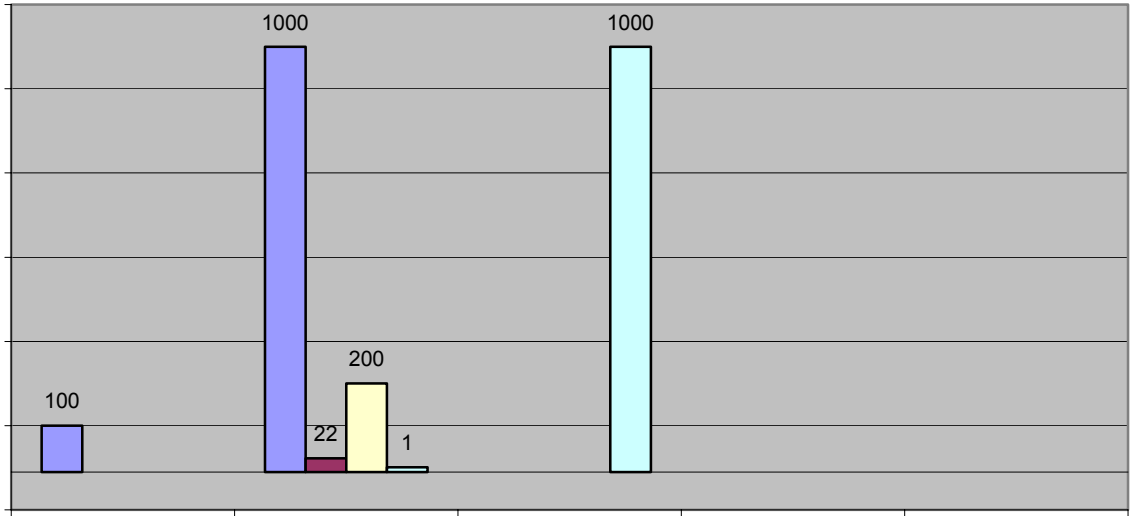
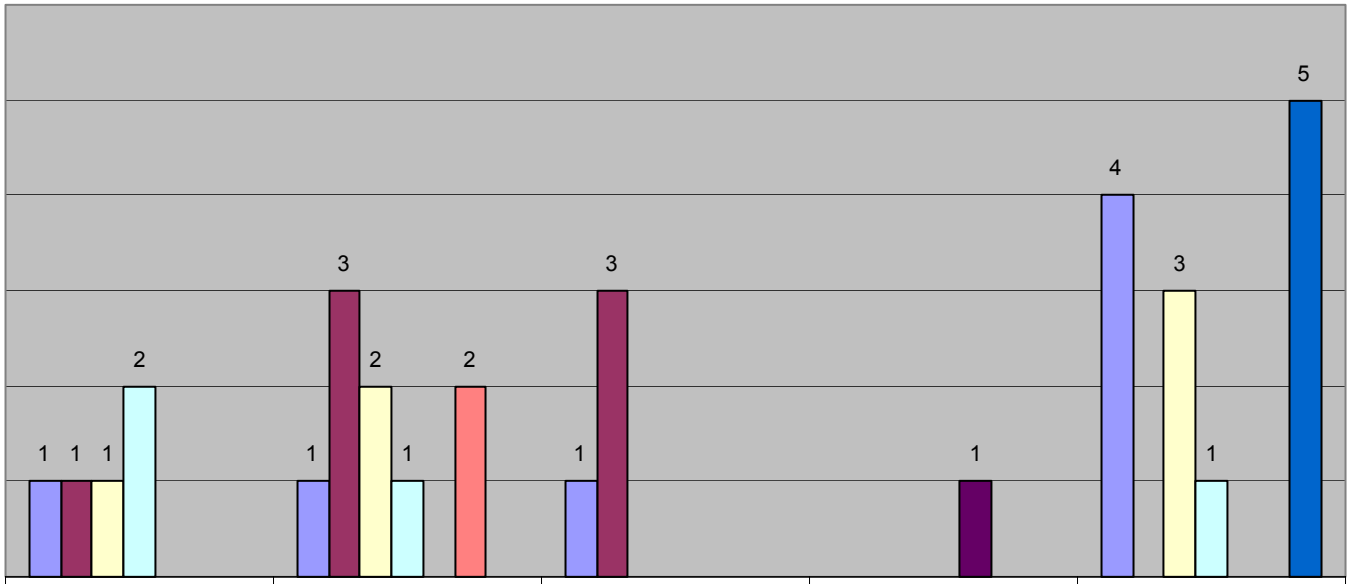


Figure 1. Nez Perce National Historical Sites sampled during the 2002 field season.
WASHINGTON
OREGON
IDAHO
MONTANA
WYOMING
Columbia River
Missouri River
Snake River
Bear Paw Battlefield
Heart of the Monster (Kamiah)
Nez Perce Historical Park (Spalding)
Big Hole Battlefield
Dug Bar
White Bird Battlefield
Legend
Rivers
ROADS
STATES
0 30 60 120 180 240
Kilometers
N
W
E
S



	Spalding (est. #)	White Bird (est. #)	Kamiah (est. #)	Bear Paw (est. #)	Dug Bar (est. #)
western toad	100	1000			
pacific treefrog		22			
long-toed salamander		200			
bullfrog		1	1000		

Figure 2. Amphibian species detected within the Nez Perce Historical Sites and the estimated number of individuals found at each site.



	Spalding	White Bird	Kamiah	Bear Paw	Dug Bar
racer (Genus)	1	1	1		4
western terrestrial garter snake	1	3	3		
western rattlesnake	1	2			3
gopher snake	2	1			1
plains garter snake				1	
ringneck snake		2			
western fence lizard					5

Figure 3. Reptile species detected within the Nez Perce Historical Sites and the numbers of individuals found at each site.

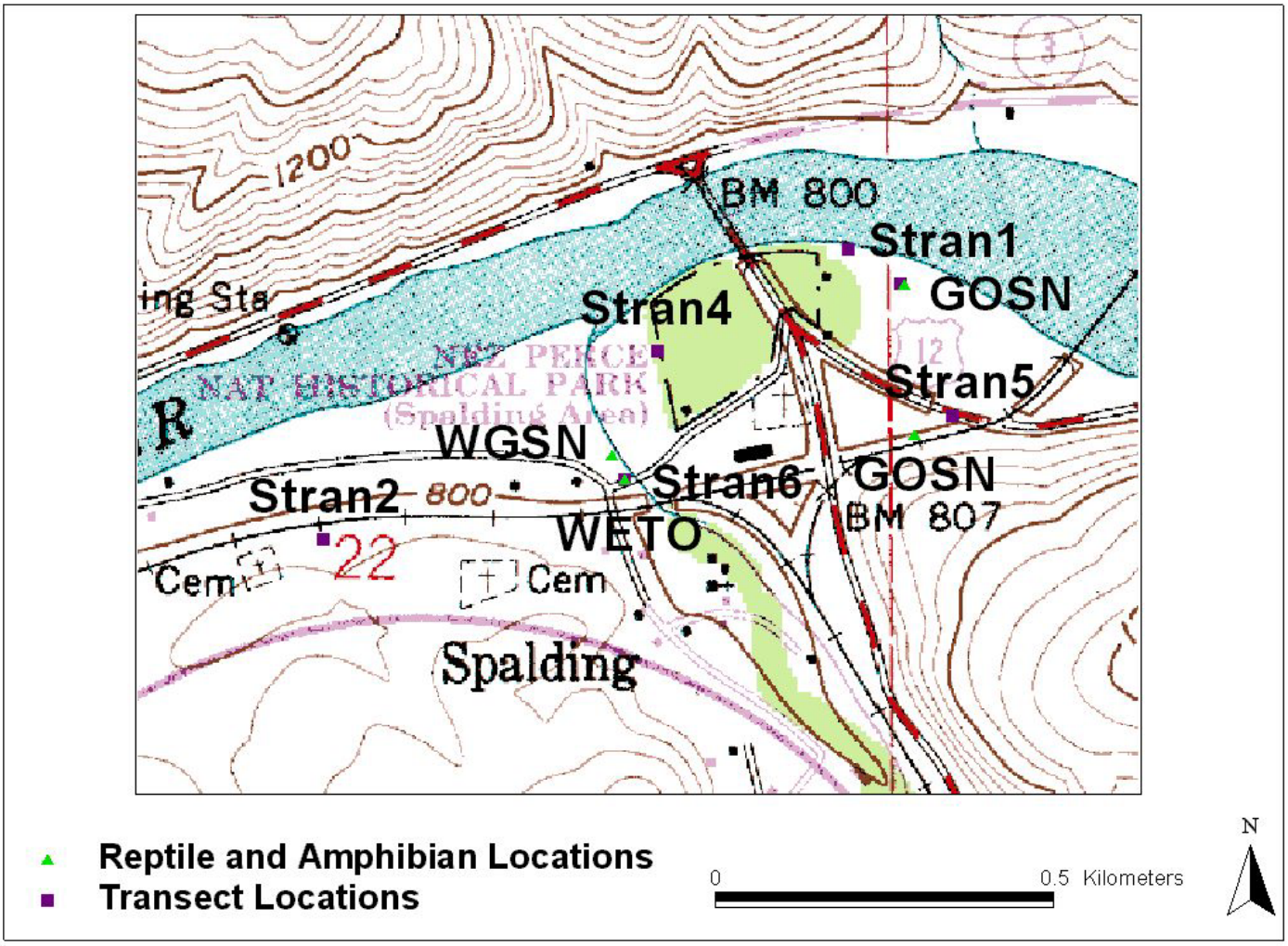


Figure 4. Sherman live trap transect locations and reptile and amphibian incidental observations during the 2002 vertebrate inventory at Spalding, Idaho.

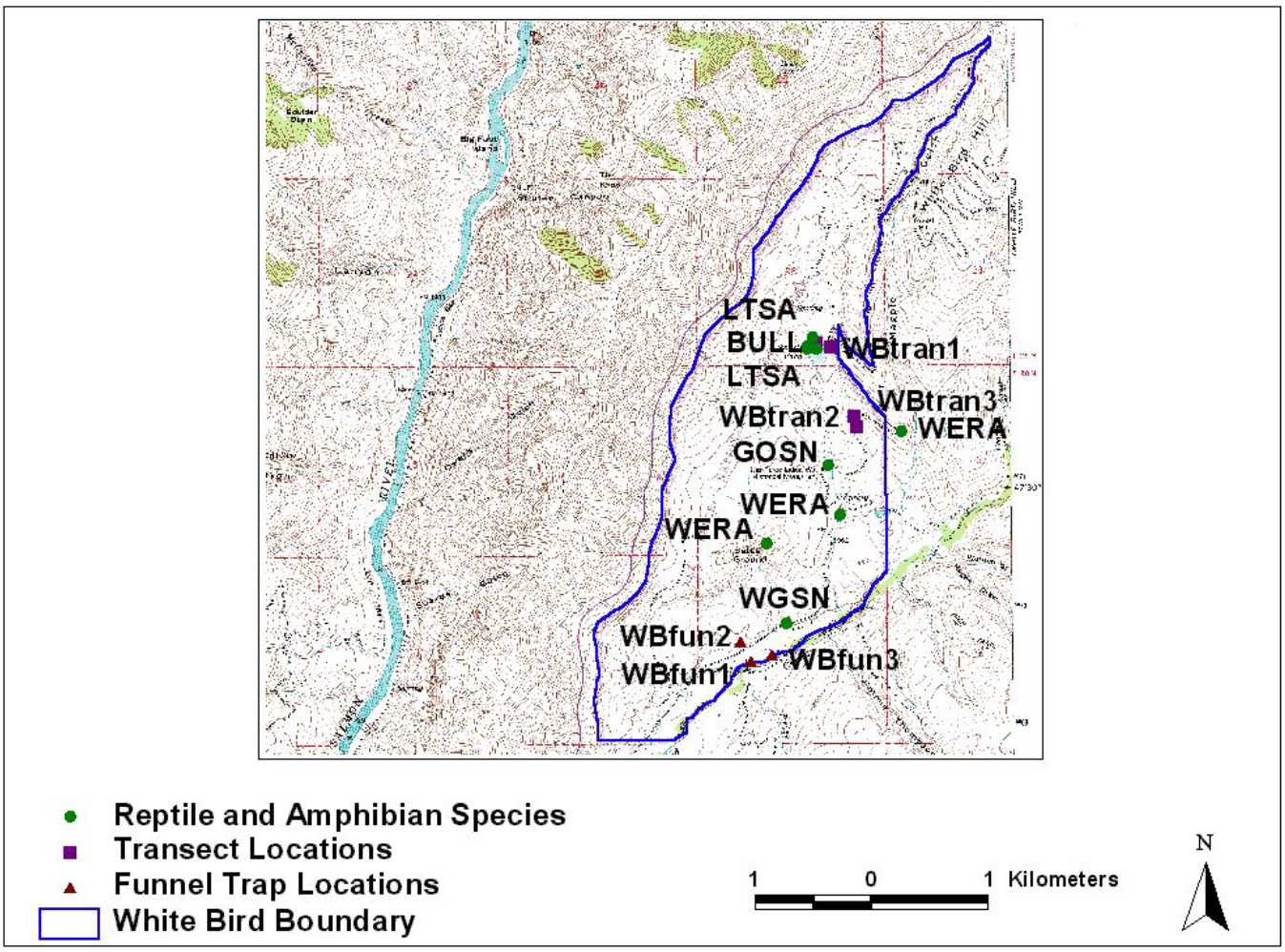


Figure 5. Trapping locations and incidental observations of reptiles and amphibians in the White Bird Battlefield during the 2002 inventory.

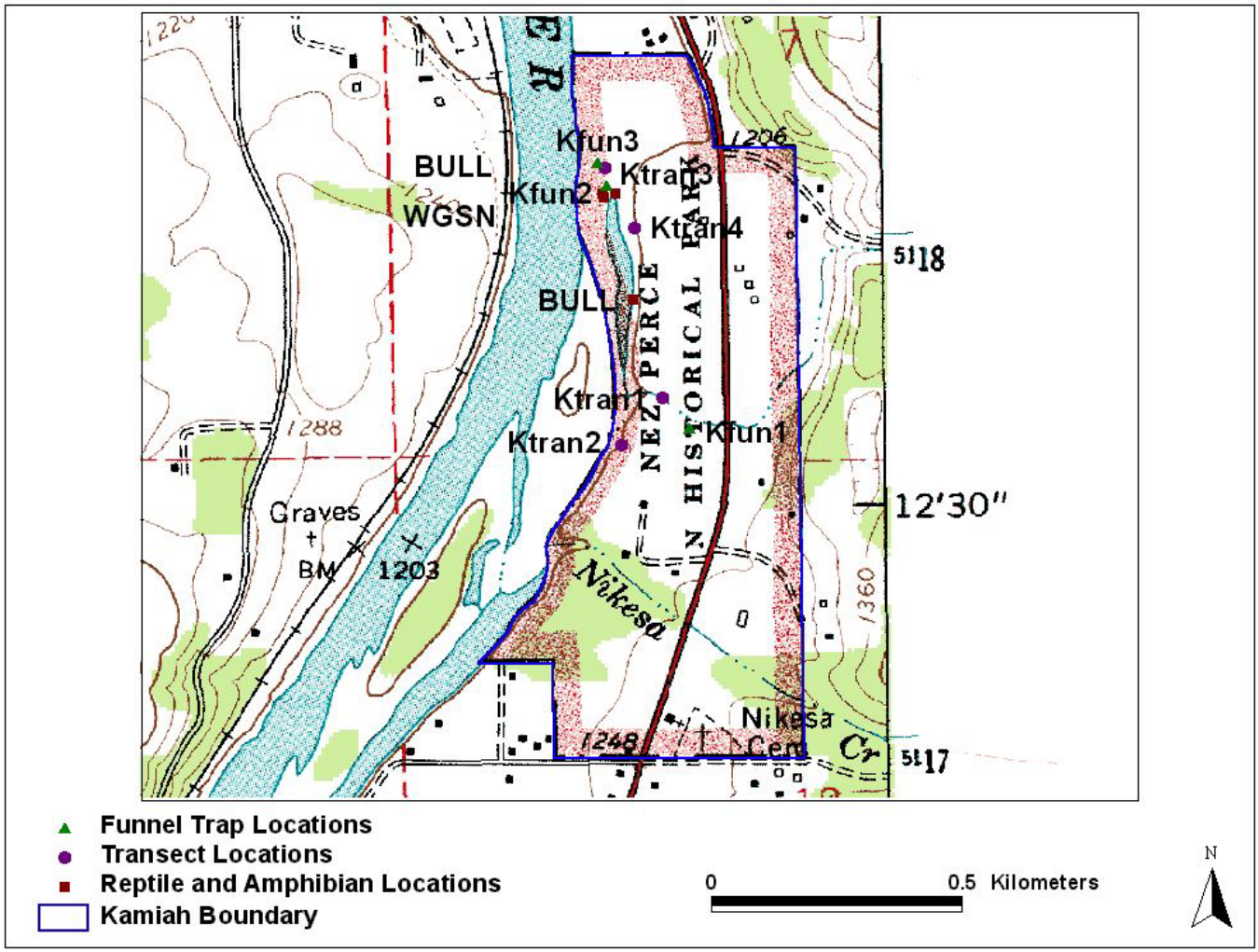


Figure 6. Trap locations and herpetofauna incidental observations during the 2002 inventory at Heart of the Monster (Kamiah), Nez Perce National Historical Site.

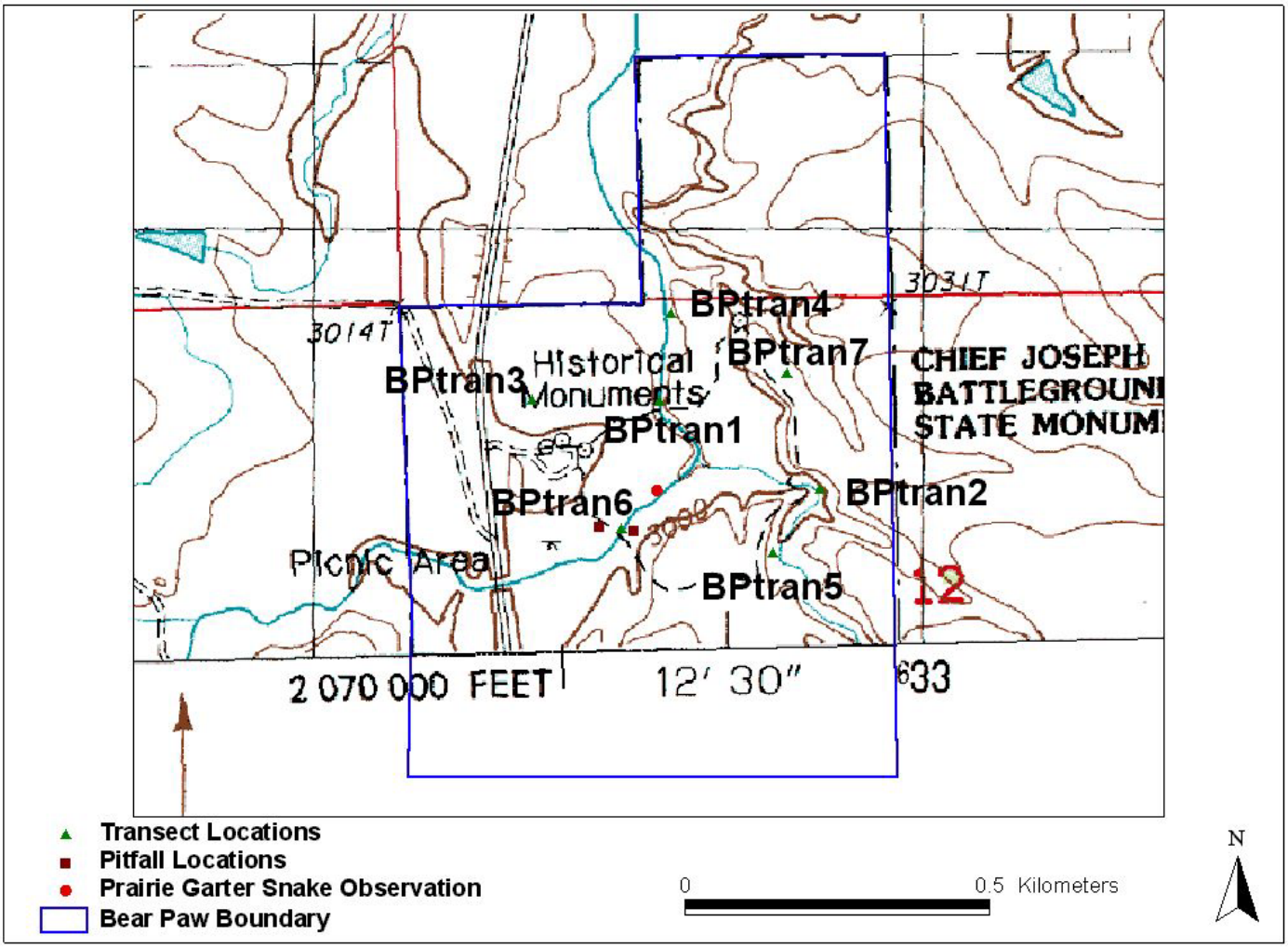


Figure 7. 2002 trap and herpetofauna locations during the inventory of Bear Paw Battlefield, Nez Perce National Historical Park.

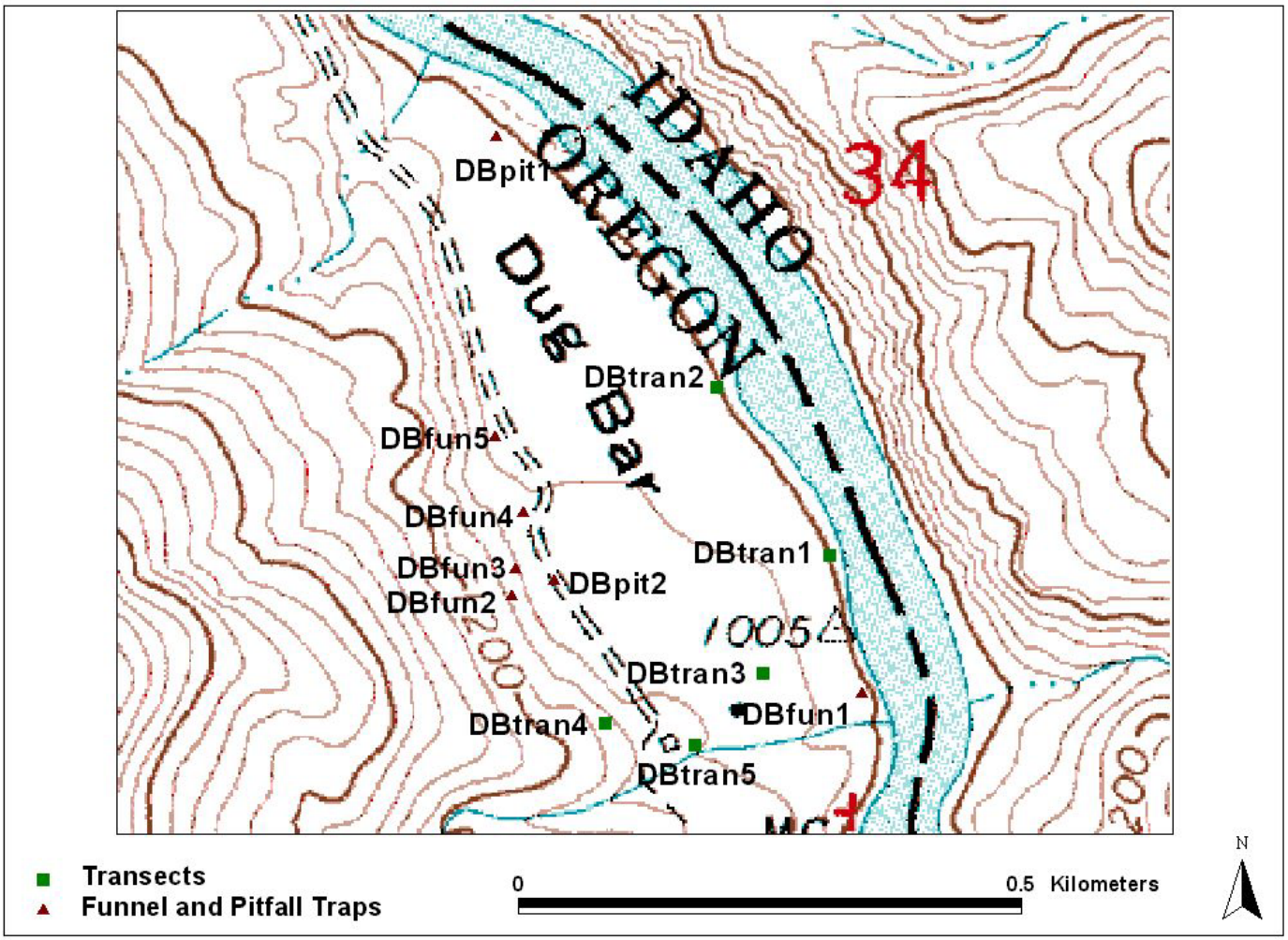


Figure 8. Trap locations in Dug Bar during the 2002 Nez Perce National Historical Park vertebrate inventory.

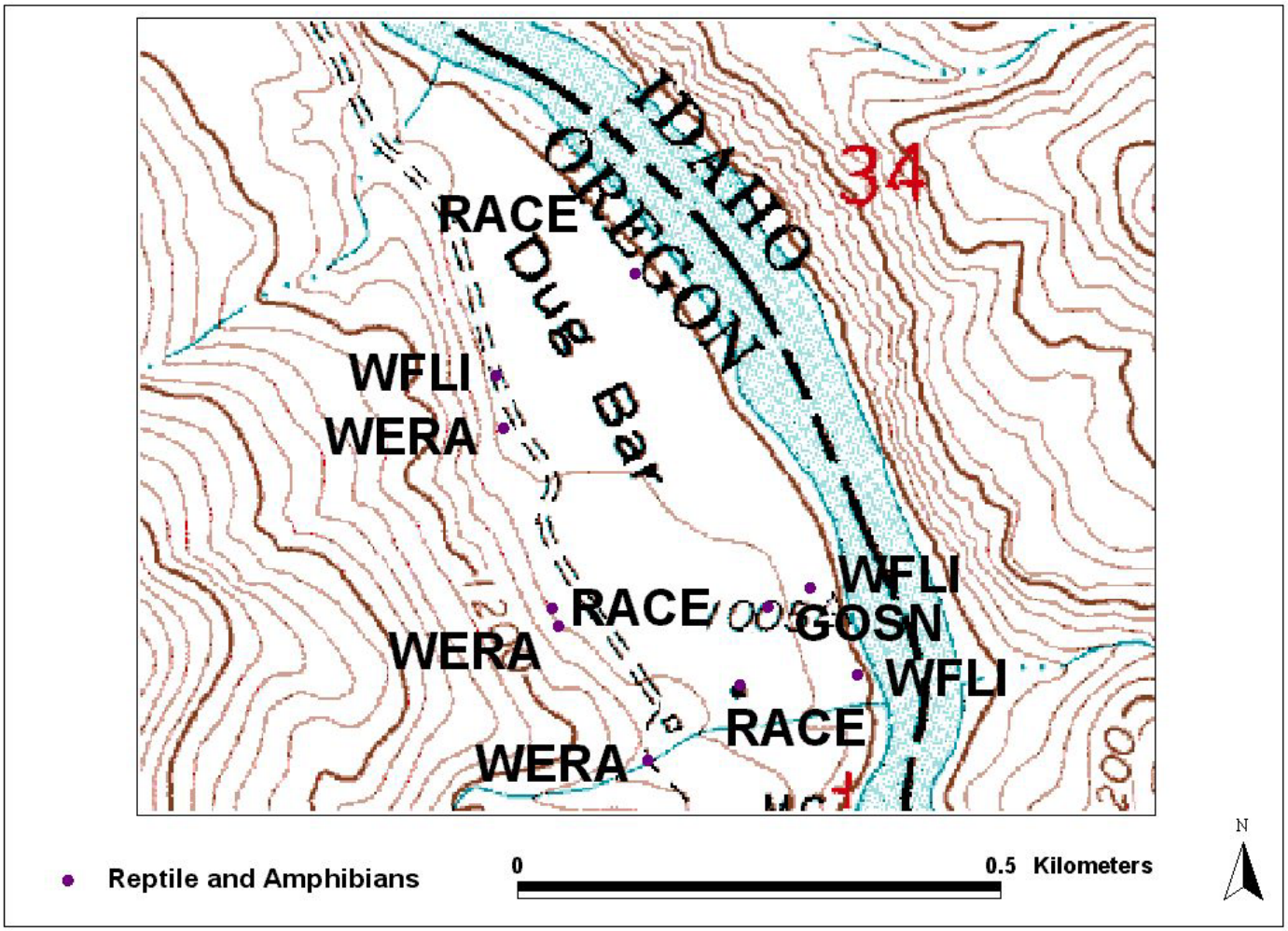


Figure 9. Incidental observations of reptiles and amphibians in the Dug Bar during the 2002 inventory of Nez Perce National Historical Park.

Appendix A

Below is a key to the NPSpecies codes used in the tables of Appendix A summarizing the status of confirmed and expected species of mammals, reptiles, and amphibians in the Nez Perce National Historical Park.

PARK STATUS

(P) Present:
Species occurrence in park is documented and assumed to be extant.
(H) Historic:
Species historical occurrence in the park is documented, but recent investigations indicate that the species is now probably absent.
(PP) Probably Present:
Park is within species range and contains appropriate habitat. Documented occurrences of the species in the adjoining region of the park give reason to suspect that it probably occurs within the park. The degree of probability may vary within this category, including species that range from common to rare.
(E) Encroaching
The species is not documented in the park, but is documented as being adjacent to the park and has potential to occur in the park.
(U) Unconfirmed:
Included for the park based on weak (unconfirmed) record or no evidence, giving minimal indication of the species occurrence in the park.
(FR) False Report:
Species previously reported to occur within the park, but current evidence indicates that the report was based on a misidentification, a taxonomic concept no longer accepted, or some other similar problem of interpretation.

SPECIES ABUNDANCE

(A) Abundant:
May be seen daily, in suitable habitat and season, and counted in relatively large numbers.
(C) Common:
May be seen daily, in suitable habitat and season, but not in large numbers.
(U) Uncommon:
Likely to be seen monthly in appropriate season/habitat. May be locally common.
(R) Rare:
Present, but usually seen only a few times each year.
(O) Occasional:
Occurs in the park at least once every few years, but not necessarily every year. Applicable to animals only.
(UNK) Unknown:
Abundance unknown.

RESIDENCY

(B) Breeder:
Population reproduces in the park.
(R) Resident:
A significant population is maintained in the park for more than two months each year, but it is not known to breed there.
(M) Migratory:
Migratory species that occurs in park approximately two months or less each year and does not breed there.
(V) Vagrant:
Park is outside of the species usual range.

(UNK) Unknown:
Residency status in park is unknown.

SPECIES NATIVITY

(N) Native:
The species is native to the park (either endemic or indigenous), or if the Park Status is Probably Present as defined above, the species would be native to the park if it were eventually confirmed in the park.
(E) Non-Native (EXOTIC):
The species is not native to the park (neither endemic nor indigenous), or if the Park Status is Probably Present as defined above, the species would not be native to the park if it were eventually confirmed in the park. Persistent plant populations (as defined below) that reproduce are also considered non-native.
(UNK) Unknown:
Nativity classification in park is unknown.

SPECIES OF MANAGEMENT PRIORITY

(Y) YES or (N) NO

SPECIES OF EXPLOITATION CONCERN

(Y) YES or (N) NO

Table A-1. Summary of NPSpecies Codes for potentially occurring amphibian and reptile species at the Nez Perce National Historical Park (Spalding).

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Bufo boreas	western toad	Present	Rare	Breeder	Native	Yes	No
Rana lutieventris	columbia spotted frog	Probably Present					
Coluber constrictor	racer	Present	Common	Breeder	Native	No	No
Pituophis catenifer	gopher snake	Present	Abundant	Breeder	Native	No	No
Thamnophis elegans	western terrestrial garter snake	Present	Abundant	Breeder	Native	No	No
Crotalus viridis	western rattlesnake	Present	Rare	Resident	Native	No	No

Table A-2. Summary of NPSpecies Codes for potentially occurring mammal species at Spalding.

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Sorex vagrans	vagrant shrew	Probably Present					
Sylvilagus nattallii	Nuttall's/ mountain cottontail	Present	Common	Breeder	Native	No	No
Tamiasciurus hudsonicus	red squirrel	Present	Abundant	Breeder	Native	No	No
Marmota flaviventris	yellow-bellied marmot	Present	Uncommon	Unknown	Native	No	No
Thomomys talpoides	northern pocket gopher	Present	Abundant	Breeder	Native	No	No
Castor canadensis	american beaver	Present	Common	Rare	Native	No	No
Reithrodontomys megalotis	western harvest mouse	Present	Uncommon	Breeder	Native	No	No
Peromyscus maniculatus	deer mouse	Present	Abundant	Breeder	Native	No	No
Neotoma cinerea	bushy-tailed woodrat	Probably Present					
Microtis pennsylvanicus	meadow vole	Probably Present					
Ondatra zibethicus	common muskrat	Present	Common	Unknown	Native	No	No
Canis latrans	coyote	Present	Common	Unknown	Native	No	No
Vulpes vulpes	red fox	Present	Rare	Unknown	Native	No	No
Procyon lotor	common raccoon	Present	Uncommon	Unknown	Native	No	No
Mustela frenata	long-tailed weasel	Probably Present					
Mustela vison	mink	Present	Common	Rare	Native	No	No
Taxidea taxus	American badger	Present	Uncommon	Unknown	Native	No	No
Lontra canadensis	river otter	Present	Uncommon	Migratory	Native	No	No
Mephitis mephitis	striped skunk	Present	Common	Rare	Native	No	No
Lynx rufus	bobcat	Present	Rare	Migratory	Native	No	No
Cervus elaphus	elk	Probably Present					
Odocoileus virginianus	white-tailed deer	Present	Common	Migratory	Native	No	No

Table A-3. Summary of NPSpecies Codes for potentially occurring amphibian and reptile species at White Bird National Historic Battlefield.

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Ambystoma macrodactylum	long-toed salamander	Present	Abundant	Breeder	Native	No	No
Bufo boreas	western toad	Present	Uncommon	Breeder	Native	Yes	No
Hyla regilla	pacific treefrog	Present	Common	Breeder	Native	No	No
Rana lutieventris	columbia spotted frog	Probably Present					
Rana catebeiana	bullfrog	Present	Common	Unknown	Exotic	Yes	No
Diadophis puncatus	ringneck snake	Present	Rare	Breeder	Native	Yes	No
Coluber constrictor	racer	Present	Common	Breeder	Native	No	No
Pituophis catenifer	gopher snake	Present	Common	Breeder	Native	No	No
Thamnophis sirtalis	common garter snake	Probably Present					
Thamnophis elegans	western terrestrial garter snake	Present	Common	Breeder	Native	No	No
Crotalus viridis	western rattlesnake	Present	Abundant	Breeder	Native	No	No

Table A-4. Summary of NPSpecies Codes for potentially occurring mammal species at White Bird National Historic Battlefield.

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Sorex vagrans	vagrant shrew	Present	Rare	Unknown	Native	No	No
Spermophilus columbianus	columbian ground squirrel	Probably Present					
Marmota flaviventris	yellow-bellied marmot	Present	Uncommon	Unknown	Native	No	No
Thomomys talpoides	northern pocket gopher	Present	Common	Breeder	Native	No	No
Peromyscus maniculatus	deer mouse	Present	Abundant	Breeder	Native	No	No
Neotoma cinerea	bushy-tailed woodrat	Present	Abundant	Breeder	Native	No	No
Canis latrans	coyote	Present	Abundant	Breeder	Native	No	No
Mustela frenata	long-tailed weasel	Probably Present					
Taxidea taxus	American badger	Present	Unknown	Unknown	Native	No	No
Lynx rufus	bobcat	Present	Rare	Unknown	Native	No	No
Cervus elaphus	elk	Present	Abundant	Migratory	Native	No	No
Odocoileus virginianus	white-tailed deer	Present	Abundant	Breeder	Native	No	No

Table A-5. Summary of NPSpecies Codes for potentially occurring amphibian and reptile species at Heart of the Monster (East Kamiah).

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Rana catesbeiana	bullfrog	Present	Abundant	Breeder	Exotic	Yes	No
Coluber constrictor	racer	Present	Common	Resident	Native	No	No
Pituophis melanoleucus	gopher snake	Probably Present					
Thamnophis sirtalis	common garter snake	Probably Present					
Thamnophis elegans	western terrestrial garter snake	Present	Abundant	Breeder	Native	No	No

Table A-6. Summary of NPSpecies Codes for potentially occurring mammal species at Heart of the Monster (East Kamiah).

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Sorex vagrans	vagrant shrew	Present	Uncommon	Breeder	Native	No	No
Sorex cinereus	masked shrew	Probably Present					
Lepus americanus	snowshoe hare	Probably Present					
Tamias amoenus	yellow pine chipmunk	Probably Present					
Spermophilus columbianus	columbian ground squirrel	Probably Present					
Tamiasciurus hudsonicus	red squirrel	Probably Present					
Thomomys talpoides	northern pocket gopher	Present	Abundant	Breeder	Native	No	No
Castor canadensis	american beaver	Present	Common	Unknown	Native	No	No
Reithrodontomys megalotis	western harvest mouse	Present	Common	Breeder	Native	No	No
Peromyscus maniculatus	deer mouse	Present	Abundant	Breeder	Native	No	No
Clethrionomys gapperi	southern red-backed vole	Present	Abundant	Breeder	Native	No	No
Microtus longicaudus	long-tailed vole	Present	Common	Breeder	Native	No	No
Microtus pennsylvanicus	meadow vole	Present	Common	Breeder	Native	No	No
Ondatra zibethicus	common muskrat	Present	Common	Unknown	Native	No	No
Canis latrans	coyote	Present	Abundant	Rare	Native	No	No
Procyon lotor	common raccoon	Present	Abundant	Resident	Exotic	No	No
Mustela frenata	long-tailed weasel	Present	Uncommon	Migratory	Native	No	No
Mustela vison	american mink	Present	Uncommon	Unknown	Native	No	No
Lontra canadensis	river otter	Probably Present					
Mephitis mephitis	striped skunk	Probably Present					
Odocoileus hemionus	mule deer	Present	Common	Migratory	Native	No	No
Odocoileus virginianus	white-tailed deer	Present	Common	Migratory	Native	No	No

Table A-7. Summary of NPSpecies Codes for potentially occurring amphibian and reptile species at Bear Paw National Historic Battlefield.

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Ambystoma tigrinum	tiger salamander	Probably Present					
Coluber constrictor	racer	Probably Present					
Pituophis catenifer	gopher snake	Probably Present					
Thamnophis elegans	western terrestrial garter snake	Probably Present					
Thamnophis radix	plains garter snake	Present	Uncommon	Breeder	Native	No	No
Crotalus viridis	western rattlesnake	Probably Present					

Table A-8. Summary of NPSpecies Codes for potentially occurring mammal species at Bear Paw National Historic Battlefield.

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Lepus townsendii	white-tailed jack rabbit	Present	Common	Migratory	Native	No	No
Spermophilus richardsonii	Richardson's ground squirrel	Present	Abundant	Breeder	Native	No	No
Thomomys talpoides	northern pocket gopher	Probably Present					
Peromyscus maniculatus	deer mouse	Present	Abundant	Breeder	Native	No	No
Neotoma cinerea	bushy-tailed woodrat	Present	Common	Breeder	Native	No	No
Microtus pennsylvanicus	meadow vole	Present	Common	Breeder	Native	No	No
Lemmiscus curtatus	sagebrush vole	Probably Present					
Canis latrans	coyote	Present	Common	Resident	Native	No	No
Vulpes vulpes	red fox	Present	Uncommon	Migratory	Native	No	No
Taxidea taxus	American badger	Present	Uncommon	Resident	Native	No	No
Mephitis mephitis	striped skunk	Present	Uncommon	Breeder	Native	No	No
Odocoileus hemionus	mule deer	Present	Common	Resident	Native	No	No
Odocoileus virginianus	white-tailed deer	Present	Abundant	Migratory	Native	No	No
Antilocapra americana	pronghorn	Present	Abundant	Resident	Native	No	No

Table A-9. Summary of NPSpecies Codes for potentially occurring amphibian and reptile species at Dug Bar.

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Bufo boreas	western toad	Probably Present					
Sceloporus occidentalis	western fence lizard	Present	Abundant	Breeder	Native	No	No
Coluber constrictor	racer	Present	Common	Breeder	Native	No	No
Pituophis catenifer	gopher snake	Present	Common	Breeder	Native	No	No
Thamnophis elegans	western terrestrial garter snake	Probably Present					
Crotalus viridis	western rattlesnake	Present	Abundant	Breeder	Native	No	No

Table A-10. Summary of NPSpecies Codes for potentially occurring mammal species at Dug Bar.

Scientific Name	Common Name	Park Status	Abundance	Residency	Nativity	Management Priority	Exploitation Concern
Marmota flaviventris	yellow-bellied marmot	Probably Present					
Thomomys talpoides	northern pocket gopher	Probably Present					
Peromyscus maniculatus	deer mouse	Present	Abundant	Breeder	Native	No	No
Neotoma cinerea	bushy-tailed woodrat	Probably Present					
Odocoileus hemionus	mule deer	Present	Common	Migratory	Native	No	No
Ovis canadensis	bighorn sheep	Present	Unknown	Unknown	Native	No	No

Appendix B

Table B-1. Summary of information for determining park status of amphibian and reptile species not detected at Spalding. For this and all tables in Appendix B, species are listed in alphabetical order according to genus.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Ambystoma macrodactylum	long-toed salamander	Yes	Yes	Limited	Variable	Unlikely	Not Present
Ascaphus montanus	rocky mountain tailed frog	Yes	Yes	Limited	Variable	Unlikely	Not Present
Hyla regilla	pacific treefrog	Yes	Yes	Limited	Variable	Unlikely	Not Present
Rana catesbeiana	bullfrog	Possible	Yes	Limited	High	Unlikely	Not Present
Rana lutieventris	columbia spotted frog	Yes	Yes	Yes	High	Likely	Probably Present
Charina bottae	rubber boa	Yes	Yes	Limited	Low	Possible	Not Present
Diadophis punctatus	ringneck snake	Possible	Yes	Limited	Low	Possible	Not Present
Eumeces skiltonianus	western skink	Yes	Yes	Yes	Variable	Possible	Not Present
Hypsiglena torquata	night snake	Possible	Yes	Yes	Low	Unlikely	Not Present
Sceloporus occidentalis	western fence lizard	Possible	Yes	Yes	Variable	Possible	Not Present
Thamnophis sirtalis	common garter snake	Yes	Yes	Limited	High	Possible	Not Present

Table B-2. Summary of information for determining park status of mammal species not detected at Spalding.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Cervus elaphus	elk	Yes	Yes	Yes	High	Likely	Probably Present
Clethrionomys gapperi	southern red-backed vole	Yes	Yes	Limited	Variable	Possible	Not Present
Erethizon dorsatum	common porcupine	Yes	Too Low	Limited	Variable	Unlikely	Not Present
Lepus americanus	snowshoe hare	Yes	Too Low	Limited	Variable	Unlikely	Not Present
Lynx rufus	bobcat	Yes	Yes	Limited	Low	Possible	Not Present
Microtis longicaudus	long-tailed vole	Yes	Yes	Limited	Variable	Possible	Not Present
Microtis pennsylvanicus	meadow vole	Yes	Yes	Yes	Variable	Likely	Probably Present
Mustela erminea	short-tailed weasel	Yes	Yes	Limited	Variable	Possible	Not Present
Mustela frenata	long-tailed weasel	Yes	Yes	Yes	Variable	Likely	Probably Present
Neotoma cinerea	bushy-tailed woodrat	Yes	Yes	Yes	Variable	Likely	Probably Present
Odocoileus hemionus	mule deer	Yes	Yes	Limited	Variable	Possible	Not Present
Puma concolor	mountain lion	Yes	Yes	Limited	Low	Possible	Not Present
Sorex cinereus	masked shrew	Yes	Yes	Limited	Variable	Unlikely	Not Present
Sorex palustris	water shrew	Yes	Yes	Limited	Variable	Possible	Not Present
Sorex vagrans	vagrant shrew	Yes	Yes	Yes	Variable	Likely	Probably Present
Spermophilus columbianus	columbian ground squirrel	Yes	Yes	Limited	Variable	Possible	Not Present
Spilogale gracilis	western spotted skunk	Yes	Yes	Yes	Low	Possible	Not Present
Tamias amoenus	yellow pine chipmunk	Yes	Yes	Limited	High	Possible	Not Present
Ursus americanus	american blackbear	Yes	Yes	Limited	Variable	Possible	Not Present

Table B-3. Summary of information for determining park status of amphibian and reptile species not detected at White Bird Battlefield.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Ascaphus montanus	rocky mountain tailed frog	Yes	Yes	Limited	Variable	Unlikely	Not Present
Rana lutieventris	columbia spotted frog	Yes	Yes	Yes	High	Likely	Probably Present
Charina bottae	rubber boa	Yes	Yes	Limited	Low	Possible	Not Present
Eumeces skiltonianus	western skink	Yes	Yes	Limited	Variable	Possible	Not Present
Hypsiglena torquata	night snake	Possible	Yes	Limited	Low	Unlikely	Not Present
Sceloporus occidentalis	western fence lizard	Yes	Yes	Yes	Variable	Possible	Not Present
Thamnophis sirtalis	common garter snake	Yes	Yes	Yes	High	Likely	Probably Present

Table B-4. Summary of information for determining park status of mammal species not detected at White Bird Battlefield.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Clethrionomys gapperi	southern red-backed vole	Yes	Yes	Limited	Variable	Unlikely	Not Present
Erethizon dorsatum	common porcupine	Yes	Too Low	Limited	Variable	Possible	Not Present
Lepus americanus	snowshoe hare	Yes	Too Low	Limited	Variable	Unlikely	Not Present
Microtis montanus	montane vole	No	Too Low	Limited	Variable	Unlikely	Not Present
Microtis pennsylvanicus	meadow vole	No	Yes	Limited	Variable	Unlikely	Not Present
Mustela erminea	short-tailed weasel	Yes	Yes	Limited	Low	Possible	Not Present
Mustela frenata	long-tailed weasel	Yes	Yes	Yes	Low	Likely	Probably Present
Odocoileus hemionus	mule deer	Yes	Yes	Limited	High	Possible	Not Present
Ondatra zibethicus	muskrat	Yes	Yes	Limited	Variable	Possible	Not Present
Procyon lotor	common raccoon	Yes	Yes	Limited	Variable	Unlikely	Not Present
Puma concolor	mountain lion	Yes	Yes	Limited	Low	Possible	Not Present
Reithrodontomys megalotis	western harvest mouse	No	Yes	Yes	Variable	Unlikely	Not Present
Sorex cinereus	masked shrew	Yes	Yes	Limited	Variable	Possible	Not Present
Sorex palustris	water shrew	Yes	Yes	Limited	Low	Unlikely	Not Present
Spermophilus columbianus	columbian ground squirrel	Yes	Yes	Yes	High	Likely	Probably Present
Tamias amoenus	yellow pine chipmunk	Yes	Yes	Limited	High	Unlikely	Not Present
Tamiasciurus hudsonicus	red squirrel	Yes	Yes	Limited	High	Unlikely	Not Present
Ursus americanus	american blackbear	Yes	Yes	Limited	Variable	Possible	Not Present

Table B-5. Summary of information for determining park status of amphibian and reptile species not detected at Heart of the Monster.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Ambystoma macrodactylum	long-toed salamander	Yes	Yes	Yes	Variable	Possible	Not Present
Bufo boreas	western toad	Yes	Yes	Yes	Variable	Possible	Not Present
Hyla regilla	pacific treefrog	Yes	Yes	Yes	Variable	Possible	Not Present
Plethodon idahoensis	coeur d' alene salamander	Yes	Yes	Limited	Variable	Unlikely	Not Present
Rana ludeiventris	columbia spotted frog	Yes	Yes	Yes	High	Possible	Not Present
Charina bottae	rubber boa	Yes	Yes	Limited	Low	Possible	Not Present
Crotalus viridis	western rattlesnake	Yes	Yes	Limited	Variable	Possible	Not Present
Diadophis punctatus	ringneck snake	Possible	Yes	Limited	Low	Possible	Not Present
Eumeces skiltonianus	western skink	Yes	Yes	Limited	Variable	Possible	Not Present
Pituophis melanoleucus	gopher snake	Yes	Yes	Yes	High	Likely	Probably Present
Thamnophis sirtalis	common garter snake	Yes	Yes	Yes	High	Likely	Probably Present

Table B-6. Summary of information for determining park status of mammal species not detected at Heart of the Monster.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Cervus elaphus	elk	Yes	Yes	Limited	High	Possible	Not Present
Erethizon dorsatum	common porcupine	Yes	Yes	Limited	Variable	Possible	Not Present
Lepus americanus	snowshoe hare	Yes	No	Yes	Variable	Likely	Probably Present
Lontra canadensis	northern river otter	Yes	Yes	Yes	Variable	Likely	Probably Present
Lynx rufus	bobcat	Yes	Yes	Limited	Low	Possible	Not Present
Marmota flaviventris	yellow-bellied marmot	Yes	Too Low	Limited	High	Unlikely	Not Present
Mephitis mephitis	striped skunk	Yes	Yes	Yes	Variable	Likely	Probably Present
Microtus montanus	montane vole	Possible	Yes	Yes	Variable	Possible	Not Present
Mustela erminea	short-tailed weasel	Yes	Yes	Limited	Low	Possible	Not Present
Neotoma cinerea	bushy-tailed woodrat	Yes	Yes	Limited	Variable	Possible	Not Present
Puma concolor	mountain lion	Yes	Yes	Limited	Low	Possible	Not Present
Sorex cinereus	masked shrew	Yes	Yes	Yes	Variable	Likely	Probably Present
Sorex palustris	water shrew	Yes	Yes	Yes	Low	Possible	Not Present
Spermophilus columbianus	columbian ground squirrel	Yes	Yes	Yes	High	Likely	Probably Present
Spilogale gracilis	western spotted skunk	Yes	Yes	Limited	Low	Unlikely	Not Present
Tamias amoenus	yellow pine chipmunk	Yes	Yes	Yes	High	Likely	Probably Present
Tamiasciurus hudsonicus	red squirrel	Yes	Yes	Yes	High	Likely	Probably Present
Taxidea taxus	american badger	Yes	Yes	Limited	Variable	Unlikely	Not Present
Ursus americanus	american blackbear	Yes	Yes	Limited	Variable	Possible	Not Present

Table B-7. Summary of information for determining park status of amphibian and reptile species not detected at Bear Paw Battlefield.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Ambystoma tigrinum	tiger salamander	Yes	Yes	Possible	High	Likely	Probably Present
Bufo cognatus	great plains toad	Yes	Yes	Possible	Variable	Possible	Not Present
Pseudacris maculata	boreal chorus frog	Yes	Yes	Possible	Variable	Possible	Not Present
Rana pipiens	northern leopard frog	Yes	Yes	Limited	High	Unlikely	Not Present
Spea bombifrons	plains spadefoot	Yes	Yes	Yes	Variable	Possible	Not Present
Coluber constrictor	Racer	Yes	Yes	Yes	High	Likely	Probably Present
Crotalus viridis	western rattlesnake	Yes	Yes	Yes	Variable	Likely	Probably Present
Heterodon nasicus	western hognose snake	Yes	Yes	Yes	Low	Possible	Not Present
Phrynosoma hernandesi	greater short-horned lizard	Yes	Yes	Yes	Variable	Possible	Not Present
Pituophis catenifer	gopher snake	Yes	Yes	Yes	High	Likely	Probably Present
Thamnophis elegans	western terrestrial garter snake	Yes	Yes	Yes	High	Likely	Probably Present

Table B-8. Summary of information for determining park status of mammal species not detected at Bear Paw Battlefield.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Lemmiscus curtatus	sagebrush vole	Yes	Yes	Yes		Likely	Probably Present
Lepus americanus	snowshoe hare	Yes	Yes	Limited	High	Possible	Not Present
Lynx rufus	bobcat	Yes	Yes	Limited	Low	Possible	Not Present
Mustela nivalis	least weasel	Yes	Yes	Possible	Variable	Possible	Not Present
Mustela vision	mink	Yes	Yes	Limited	Variable	Unlikely	Not Present
Onychomys leucogaster	northern grasshopper mouse	Yes	Yes	Limited		Possible	Not Present
Perognathus fasciatus	olive-backed pocket mouse	Yes		Yes	Variable	Possible	Not Present
Reithrodontomys megalotis	western harvest mouse	Yes		Yes	Variable	Possible	Not Present
Sorex haydeni	Hayden's shrew	Yes	Yes	Limited		Possible	Not Present
Sorex vagrans	vargrant shrew	No	Yes	Limited		Unlikely	Not Present
Spermophilus tridecemlineatus	thirteen-lined ground squirrel	Yes		Limited	High	Unlikely	Not Present
Sylvilagus audubonii	desert cottontail	No		Yes	Variable	Possible	Not Present
Sylvilagus nuttallii	mountain cottontail	Yes		Possible	High	Unlikely	Not Present
Thomomys talpoides	northern pocket gopher	Yes	Yes	Possible	High	Likely	Probably Present
Vulpes velox	swift fox	Yes		Yes	Low	Possible	Not Present
Zapus hudsonius	western jumping mouse	Yes	Too Low	Limited	High	Unlikely	Not Present

Table B-9. Summary of information for determining park status of amphibian and reptile species not detected at Dug Bar.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Ambystoma macrodactylum	long-toed salamander	Yes	Yes	Limited	High	Unlikely	Not Present
Bufo boreas	western toad	Yes	Yes	Yes	Variable	Likely	Probably Present
Hyla regilla	pacific treefrog	Yes	Yes	Limited	Variable	Unlikely	Not Present
Charina bottae	rubber boa	Yes	Yes	Limited	Low	Unlikely	Not Present
Eumeces skiltonianus	western skink	Yes	Yes	Limited	Variable	Unlikely	Not Present
Hypsiglena torquata	night snake	Possible	Yes	Yes	Low	Possible	Not Present
Thamnophis elegans	western terrestrial garter snake	Yes	Yes	Yes	High	Likely	Probably Present

Table B-10. Summary of information for determining park status of mammal species not detected at Dug Bar.

Scientific Name	Common Name	Within Range	Elevation	Habitat	Detectability	Remarks	Status
Marmota flaviventris	yellow-bellied marmot	Yes	Yes	Yes	High	Likely	Probably Present
Neotoma cinerea	bushy-tailed woodrat	Yes	Yes	Yes	Variable	Likely	Probably Present
Ochotoma princeps	american pika	Possible	Too Low	Yes	Variable	Unlikely	Not Present
Puma concolor	mountain lion	Yes	Yes	Limited	Low	Possible	Not Present
Spermophilus lateralis	golden-mantled ground squirrel	Possible		Possible	Variable	Unlikely	Not Present
Taxidea taxus	american badger	Yes	Yes	Possible	Variable	Possible	Not Present
Thomomys talpoides	northern pocket gopher	Yes	Yes	Yes	High	Likely	Probably Present

Appendix C

Form C-1. Data sheet used for all amphibian and reptile surveys of wetlands (ponds, lakes, wet meadows, etc.) within Nez Perce National Historical Sites.

AMPHIBIAN SURVEY DATA SHEET - modified after S.P. Corn, NBS, Fort Collins, CO (ver. 1 May 1996)

Herpetology Laboratory, Idaho State University and Idaho Museum of Natural History, Box 8007, Pocatello, ID 83209
(208) 236-3922 voice 236-4570 FAX e-mail: petechar@isu.edu

DATE		**BEGIN TIME**		**END TIME**		**OBSERVERS**		
LOCALITY								
STATE		**COUNTY**		**MAP NAME**		**OWNER**	**ELEVATION**	
T	**R**	**S**		**UTM ZONE/DATUM**		**NORTHING**	**EASTING**	
AMPHIBIAN AND REPTILE SPECIES PRESENT (INDICATE NUMBERS IN CATEGORIES IF POSSIBLE)								
SPECIES	**ADULT**	**JUVENILE**	**METAM.**	**LARVAE**	**EGGS**	**CALLING**	**TECHNIQUE(S)**	**VOUCHER**
FISH PRESENT		YES ??? NO		**FISH SPECIES:**				
ENTIRE SITE SEARCHED?		YES NO		**IF NO, IDICATE AREA:**			meters of shoreline habitat	
WEATHER:	**RADIATION:** CLEAR PARTIAL OVERCAST					**WIND**: CALM LIGHT MEDIUM HEAVY		
AIR TEMPERATURE (1 M SHADED)		**°C OR F**		**% CLOUD COVER:**		**PRECIPTATION:** SNOW RAIN		
WATER	**TEMPERATURE (1CM)**			**pH:**		**CONDUCTIVITY**	**SAMPLE?**	
	COLOR CLEAR STAINED			T**URBIDITY** CLEAR CLOUDY				
SITE DESCRIPTION	PUT SKETCH AND ADDITIONAL COMMENTS ON BACK OF SHEET							
ORIGIN NATURAL MAN-MADE MAN-MODIFIED				**DRAINAGE** PERMANENT OCCASIONAL NONE				
SITE TYPE TEMPORARY or PERMANENT LAKE/POND MARSH BOG STREAM SPRING/SEEP ACTIVE or INACTIVE BEAVER POND								
NATIONAL WETLAND INVENTORY CLASIFICATION				**GAP ANALYSIS COVER TYPE (IF KNOWN)**				
STREAM ORDER 1 2 3 4 5 6								
SITE LENGTH m	**SITE WIDTH** m		**MAXIMUM DEPTH** < 1M 1 - 2 M > 2 M					
PRIMARY SUBSTRATE SILT/MUD SAND/GRAVEL COBBLE BOULDER/BEDROCK OTHER:								
% OF LAKE MARGIN WITH EMERGENT VEGETATION 0 1 - 25 25 - 50 >50								
EMERGENT VEGETATION SPECIES (IN ORDER OF ABUNDANCE)								
NORTH SHORELINE CHARACTERISTICS			SHALLOWS PRESENT	SHALLOWS ABSENT	EMERGENT VEG PRESENT		EMERGENT VEG ABSENT	
DISTANCE TO FOREST EDGE m			**FOREST TREE SPECIES**					

Form C-2. Small mammal trapping transect form.

Small Mammal Transect Form **ID #:_____**

Observer:_____ Origin UTM:_____
Prebait Date:_____ Transect Bearing:_____
Open Date:_____ Check Date:_____
Slope:_____ Aspect:_____ Elevation:_____

Location Description:_____

_____

Habitat Description:_____

Weather During Trap Period:_____

Trp	Species	Cap #	Age/Sex	Wgt	Location	Microhabitat	Voucher #	UTM	L T HF
1									
2									
3									
4									

Trp	Species	Cap #	Age/Sex	Wgt	Location	Microhabitat	Voucher #	UTM	L T HF
5									
6									
7									
8									
9									
10									

Form C-3. Wire funnel trap and small mammal trap capture form.

Wire Funnel Trap Capture Form **ID#_____**

Observer:_____ Open Date:_____ Close Date:_____

Center UTM:_____ Elevation:_____

Capture Period Weather:_____ Slope:_____ Aspect:_____

Location Description:_____

_____

Habitat Description:_____

Capture #	Capture Date	Species	Age/Sex	L	T	HF Voucher #

ID#_____

Observer:_____ Open Date:_____ Close Date:_____

Center UTM:_____ Elevation:_____

Capture Period Weather:_____ Slope:_____ Aspect:_____

Location Description:_____

_____

Habitat Description:_____

Capture #	Capture Date	Species	Age/Sex	L	T	HF Voucher #

Form C-4. Data form used for all incidental observations of amphibians and reptiles.

AMPHIBIAN AND REPTILE INDIVIDUAL OBSERVATION FORM

(April 2002)

Please provide whatever information you can, even if you are unsure of the species.

Species: _____ Number of Animals _____

Observation Date: ____/____/____ Time: _____ am pm (circle one)

Observer Name(s) _____

Affiliation: _____

Address: _____

Phone No: _____ Have you seen this species before? _____

Description of Animal (size, color, pattern, pupil shape, skin texture, etc.): _____

_____ Did you photograph the animal? _____

Description of Animal's Behavior: _____

Animal's Location: (Be as accurate as possible; e.g., 4.5 miles north and 3.3 miles east of known landmark; Latitude and Longitude; UTM coordinates; or Range, Township, and Section): _____

County _____ State _____

Habitat: _____

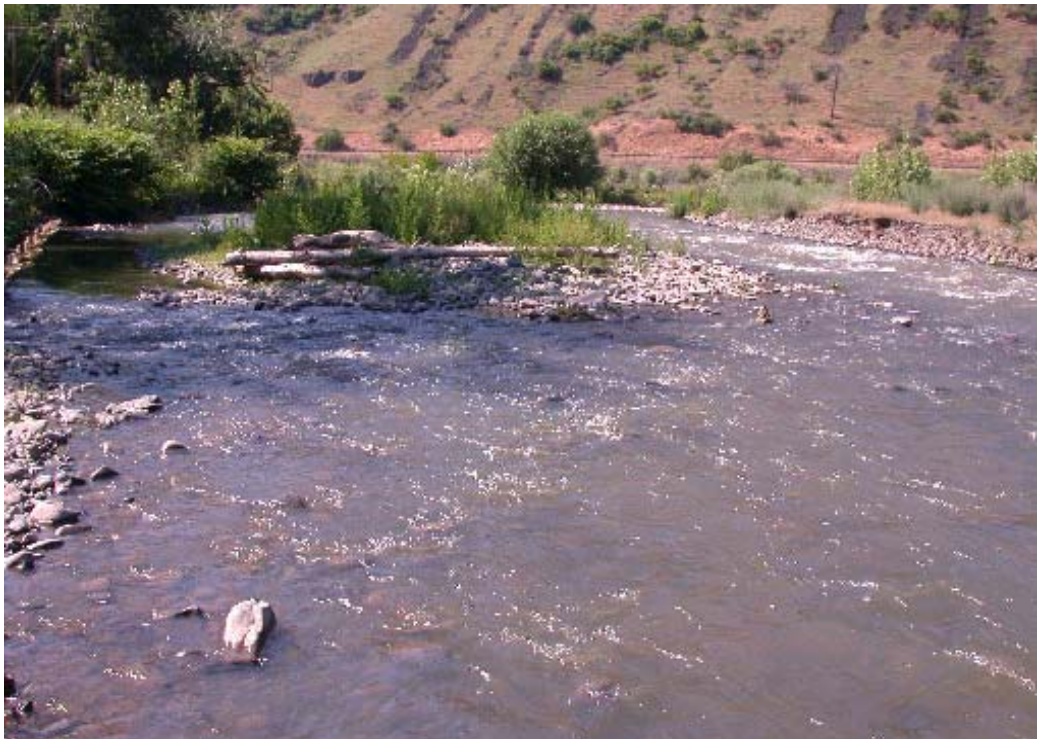
Weather: (temperature, cloud cover, wind, etc.): _____

Remarks: _____

Please return to:

Dr. Chuck Peterson
Idaho Museum of Natural History
Box 8007, Idaho State University
Pocatello, Idaho 83209
(208) 282-3922 office 2824570 FAX E-mail: peterchar@isu.edu Website: www.isu.edu/~petechar

Appendix D



Representative Photos 1 and 2: Lapwai Creek and Transect #1 along the Clearwater River in the Spalding site of the Nez Perce National Historical Park, Spalding, ID.

Representative Photos 3 and 4: Swartz Pond and an overview of the White Bird National Battlefield, White Bird, ID.

Representative Photos 5 and 6: Kamiah Pond and the overview of the Heart of the Monster, East Kamiah, ID.

Representative Photo 7: Overview of Snake Creek and the prairie land of Bear Paw National Battlefield, Chinook, MT.

Representative Photos 8 and 9: Habitat variation at Dug Bar National Historical Site on the Snake River in Hells Canyon, OR.